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LECTURES
ON
ARCHITECTURE,

COMPRISING THE
HISTORY OF THE ART

FROM THE
EARLIEST TIMES TO THE PRESENT DAY :

DELIVERED AT THE SURREY AND RUSSELL INSTITUTIONS, LONDON,
AND THE PHILOSOPHICAL INSTITUTION AT BIRMINGHAM.

By JAMES ELMES,
ARCHITECT,

Author of "The Memoirs of the Life and Works of Sir Christopher Wren," "A
Treatise on Dilapidations," "Hints for the Improvement of Prisons," &c.

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1823.

TO
HIS MOST EXCELLENT MAJESTY
GEORGE THE FOURTH,
OF THE
UNITED KINGDOM
OF
GREAT BRITAIN AND IRELAND,
KING,
&c. &c. &c.
THE ENLIGHTENED PATRON AND PROTECTOR
OF THE
BRITISH SCHOOL OF ART,
THESE
LECTURES ON ARCHITECTURE
Are, by his gracious Permission,
AND WITH ALL HUMILITY,
DEDICATED
BY HIS MAJESTY'S
MOST FAITHFUL AND MOST OBEDIENT
SUBJECT AND SERVANT,
JAMES ELMES.

ADVERTISEMENT.

THE following Lectures were originally written for, and delivered at, the Surrey Institution, in the winter of 1819-20. They were, secondly, with much alteration and with many additions, made after a tour through parts of Ireland interesting for architectural antiquities, delivered at the Russell Institution in the winter of 1820; and, thirdly, re-delivered at the Surrey Institution in the spring of the present year.

The Lectures again underwent a considerable change in their arrangement: retaining the additions above alluded to, I pruned the redundancies of the whole, and read them, for the fourth time, in the early part of this summer, at the Philosophical Institution of Birmingham, by solicitation of its Committee:

here, as well as at both of the London Institutions, they appeared to afford to my auditors a degree of satisfaction which was to me peculiarly flattering.

I have quoted my authorities at the bottom of the page in the principal instances, not only to give a sanction to what I have brought forward, but to point out the sources to which the student may apply for more particular information.

I should be deficient in respect and gratitude did I not acknowledge the kindness and attention with which I was treated, during the period of reading these Lectures, by the Directors, Members, and Subscribers of the Surrey, the Russell, and the Birmingham Institutions.

J. E.

London,

August 12, 1821.

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LECTURE I.

INTRODUCTION. *Definition and Character of ARCHITECTURE: the Cultivation and Encouragement of it always found among the true Signs of Greatness and a high State of Civilization. Historical Sketch of the Art among the ancient Jews, Assyrians, Chaldeans, Egyptians, and Phœnicians. More particularly considered in EGYPT, with illustrative Examples and Description of its Style and Modes of Construction. Contemporary Nations historically cited.*



ELMES'S LECTURES

ON

ARCHITECTURE.

LECTURE I.

THE difficulties which surround the acquirement of a knowledge of the elements of civil architecture are less formidable than appear at first sight. These become easier of access as we advance, and more pleasing of aspect as we become intimate with them. The dense medium of technical formalities which obscures their attractions, like a thick and yellow fog, vanishes before the heat of determined ardour, and leaves nothing but their beauties to allure and to reward.

I therefore propose to make the following course of lectures as *popular*, that is to say as intelligible and as entertaining, as the technical nature of architecture will admit. They are offered as introductory to a more practical investigation of the subject, and intended to clear away some of the briers and brambles

which have overgrown its territories, and deterred many an admirer of the art from searching into its beauties.

To these difficulties, and their consequence, namely, a deficiency of acquaintance with the more pleasant and tasteful departments of the art on the part of the leading members of society in England, compared with those of other nations, are to be attributed the numerous monuments of bad taste which disfigure our metropolis and country. Were architecture, as a fine art, equally well understood by the nobility and gentry, by the literary and scientific world, and by the more opulent of the middle classes of England, as it was by the nobility and gentry of the Italian states and the opulent merchants of Florence and other commercial cities of modern Italy, a pure and classical style of architecture, and a refined taste in all our arts and manufactures, would equally predominate, and equally embellish the palaces, the streets, the villas, and the mansions of England, as they did the palaces, the piazzas, and the villas of Italy. Were architecture thus generally understood, non-descripts of every sort, from the plasterer to the paper-hanger, without a single necessary qualification, could not then impose them-

selves as architects upon their opulent but tasteless employers, to their infinite cost and disgrace. With such easy and necessary acquirements, the patrons of architecture would then be men of taste and knowledge of the art, and in detecting and dismissing into well-merited contempt these assuming pretenders, would conduce to the solid improvement of tasteful and correct architecture, and redound to the glory of their country. “ I cannot touch the lute,” said Themistocles, the Athenian, when questioned on his skill in music, “ but I can make a small town a great city.”*

To such honourable and respectable classes of amateurs or non-professors these lectures are principally addressed ; with a firm assurance that we have yet to be as great in art as we are in literature, science, and commerce, and with a conviction that a pure and original style of national architecture will finally prevail in this country ; which has been proscribed, by some critical drivellers of the latter part of the last century, as beyond the latitude of excellence in any of the arts dependent on design.

ARCHITECTURE, like poetry, like painting, and all other excellencies that exalt our nature,

* Bacon's Essays.

has had its *rise*, its *progress*, its *perfection*, and *decline*: and is closely connected with the progress of intellect and the philosophy of the human mind. Its *rise* took place in the very infancy of the world; its *progress* was made among the Egyptians and the early inhabitants of Greece; it reached *perfection* among the Greeks in the age of Pericles; *declined* and scintillated among the Romans; became torpid in the middle ages; and was revived, with literature and the other arts, by the great and illustrious people of modern Italy.

With us again architecture has made its progress with other arts in a similar degree; and had also its *rise* among the ancient Britons, its *progress* through the Anglo-Saxons, the Normans, and the English, properly so called; with whom one branch arrived to a splendour of perfection in construction, and then sank into a death-like slumber. The style called the classical, which is more properly the Italian, was introduced to this country by Inigo Jones and his followers of the Palladian school, was continued by the illustrious Wren, and, with various degrees of talent, by Vanburgh, Gibbs, and Kent. The art was then all but lost in the dark and tasteless days of George the First and Second, till it revived

under George the Third, in Chambers, Wyatt, and Stuart; and appears now, like its sister art of painting, still in its *progress* towards a great and glorious meridian of perfection. To our late venerable sovereign, the arts are *all* deeply indebted, and architecture not the least. Possessed of a sound and pure taste himself, initiated early in life in its elementary principles, both of design and construction, his judgement was guided by his knowledge; and the names of his architects, Chambers, Wyatt, and Stuart, and the purity of style which he patronized, are proofs of the accuracy of his discernment and the excellence of his taste. To George the Third, the gratitude of the nation must be ever due for his personal exertions in the cause of all the arts, without which the Bæotian darkness of his predecessors would have continued; for unaided by his ministers, who neither loved nor understood the arts, clouded by days of turbulence and warfare, he did more for art than any preceding British monarch since the days of the unfortunate Charles.

This encouragement, patronage, and royal favour, paved the way to our present degree of excellence, whatever it may be in the eyes of posterity; and to our present flattering pros-

pects of approaching greatness, that enable us to

“ Bid the lovely scenes at distance hail.”*

Richardson, whose works elicited the dormant genius of Reynolds nearly half a century ago, prophetically exclaimed, “ I am no prophet, nor the son of a prophet; but I will venture to predict, that if ever the ancient great and beautiful taste in painting,” to which I take leave to add in architecture also, “ revives, it will be in England.” Our dearest wishes and our most strenuous endeavours should be exerted that it may be in our days, and that we may see it with our eyes. This progressive march of art continues with slow but with auspicious promise, and appears to be approaching to an epoch. What can be done for art in these turbulent times? is often asked. The times certainly are turbulent enough, but we must not be content to wait for times of comparative repose. Every nerve must be strained without a moment's intermission, or we shall have all to begin again. It must be remembered, that the days of Pericles, of Leo

* Collins.

the Tenth, of Julius the Second, of our first Charles, and of our third George, were not the most peaceable in history ; and yet, in the first cited of those days, the works of Phidias, of Raffaello, and of Michelangiolo were produced ; and the last-mentioned are as yet the most celebrated in English art. The reasons are, that the governments and sovereigns of those days had a knowledge of art, and a fine taste and a passion for their encouragement, and when men have passions to gratify, we all know they do not wait for convenient opportunities to indulge them, but make the most of their actual situations.

Happy will it be for us, if the most be made of our actual situation,—if patronage and encouragement be given to the mass of talent in all the arts now in the country,—and if to the glorious names of Pericles, of Julius the Second, and of Leo the Tenth, we may be enabled to add the name of George the Fourth, as the most enlightened and liberal protector of the arts since the great days of Italian splendour.

This epoch, “ a consummation devoutly to be wished,” if I am not deceived, is fast approaching. I have watched it long and wishfully, and have ventured to urge, in a respect-

ful manner,* to those in whose hands the power lies, the necessity of seizing upon the mass of unemployed genius and power in art, while there yet be time. The opportunity has not been neglected. The last reign, including the period of the regency, was the first to appropriate a large sum of the public money exclusively to the arts, in the purchase of the Townley, the Elgin, and the Phigaleian marbles; and the government of our present king deserves to be recorded as the first in English history to announce in parliament an intended public patronage of those arts, which conduce so much to the fame of a great and mighty nation. “As far as his Majesty,”† said the ostensible minister of the crown, in the House of Commons, on the first meeting of parliament in the new reign, “had already presided over the councils of the nation, the result had been glorious. He trusted and was persuaded, that his Majesty would have the gratification of adding a new page of lustre to the English history; and that, as there was nothing of

* See *Annals of the Fine Arts*, (edited by the Author of these Lectures,) from its beginning to its end.

† Lord Castlereagh's speech on the address of condolence, Feb. 17, 1820.

glory left to achieve, his Majesty would snatch the only remaining laurel, by cultivating the arts of peace."

May this persuasion of his Majesty's kindness towards the arts and love for the laurels of peace, be speedily accomplished; for every good man must sigh to think, how more than ever necessary they are now become; and may these peaceful laurels, the enchanting, fragrant, and ever blooming flowers of painting, of sculpture, and of architecture, of music, of literature, and of poetry, entwine around our country's brows, and make our times the golden age of England!

In these auspicious prognostics for art, I would presume to hint, that an indiscriminate patronage of ancient or foreign art is *not* the encouragement now required by the British school. Had the Greeks fostered alone Egyptian art, they would certainly never have become the inventors of their own pure style. The Romans, on the contrary, by their exclusive patronage of Greek architects, are known only as degenerators, instead of inventors or restorers. Nor will collecting alone the master-works of ancient art, however fine, make us rank as inventors, or raise us a splendid name.

A recent* historian of the fine arts, who did not live to accomplish his task, says, that this rage for collecting, among the Romans, “led to no *improved knowledge*, and supplied no ambition of taste, although the hands of private individuals became filled, by degrees, with the productions of *Grecian excellence*. In general, they estimated what they possessed with no more sense than Mummius, who looked at most to the value at which the article was put. But Agrippa strove to carry those habits to a wiser and more useful end: in his celebrated speech soon after the close of the republic, he recommended it as an ordinance, that the works of art should be devoted to the public use in some public repositories, *for the improvement of those who meant to prosecute the arts, and for the admiration and pleasure of ALL*. It is remarkable, too, that Agrippa was the *first and last* of all the Romans who thought such a regulation worthy of their attention;” and his celebrated portico to the Pantheon immortalizes his name.

There certainly does appear *now* a prospect of English Agrippas, but they must not confine *every* effort in favour of the art of other

* The Rev. R. A. Bromley, B. D. vol. ii. p. 47.

nations and other times ; nor must they satisfy themselves by affording means of study for our students, if they do nothing for them, when they have studied, by public encouragement.

Now I am upon the subject of public encouragement, patronage, and the present rage for collecting, permit me to quote another extract from the same author, on the contrast between the Roman and Grecian modes of patronage, most applicable to the present times, when a danger is apparent of falling into an erroneous system. “ The Greeks,” says Mr. Bromley, “ resorted to their *own genius* for what they possessed. But in Rome, what was executed as original works, and by native artists, bore a very small proportion to what was brought there by distant collections ; and *where the passion for collecting is predominant, all pretensions to patronage must be gone.* But the Romans collected even from Egypt, not merely the golden statue of Cleopatra, which Augustus set up in the temple of Venus, and which might have accounted in some degree for such spoils of Egyptian art, but whatever else of ingenuity could be drawn from thence. And those Egyptian collections they made when Rome had been long enriched in

the arts of Greece, Sicily, and Carthage. Under such circumstances, to collect from Egypt, and in abundance, certainly argued at least *more vanity than taste*, and showed they sought those works more as *spoils* than as *treasures*."

Let it not be said of us, as it was of the Romans, and recently with as much propriety of the French, that we obtain from other countries, and from other times, what we could not gain from our native genius ; and that we copy and imitate more than we adopt and invent.

Our present state of art, and of its noblest treasures of other times, resembles that of the Romans at the time of Marcellus, who, according to Plutarch, (in his life of that illustrious Roman,) after possessing themselves of all the best treasures of art, which had enriched Greece, Macedon, and Sicily, together with the sculptures of Carthage, said they were now in a state, (and we may apply the remark to ourselves) "*to begin to talk of arts and artists*."

MAN is by nature a building, a contriving being, prone to supply his wants from the nearest source. These primary necessities being supplied, he as regularly seeks to decorate

and to superadd luxuries and embellishments. Thus,* “ architecture owed its *birth* to necessity, and its *embellishments* to luxury.” Thus the cave grew into a temple, the hut into a mansion, and the cabin became converted to a palace.

In a state of simple nature, man is in want of every necessary, it being a part of the compact by which he holds his divine gift of reason. Man alone, of all created beings, never stands intellectually still : man, of all created beings alone, improves as he proceeds. Other sentient beings are the same to day as they were in the infancy of the world : man, only, as a species improves or degenerates. Every necessary required by him is to be sought and formed by himself from its simplest elements. Naked came he into the world, and naked (as to his own exertions) must he depart from it. He has to feed, and clothe, and lodge himself.

In the natural history of our species, whether we seek it in the records of the earliest inhabitants of the ancient world, or among the uncultivated inhabitants of what to us may be called a new world,—the culinary, the cloth-

* Goguet l'Origine des Loix, des Arts, &c. tom. i. p. 133.

ing, the building, and the graphic arts, to whatever degree of culture they may have arrived, have invariably the same origin.

Architecture, or the building art, is necessarily of too much importance to the welfare and comfort of man, to be neglected or despised by any but by the most vain and superficial. It is the art by which we can best distinguish civilized man from his rude and barbarous ancestry; and, what is of more importance, it forms a scale of comparative cultivation, and of the progress of intellect between nation and nation. The divine Plato* even admits that the study of politics and legislation began with the building of cities. Architecture is the most faithful recorder of the great and noble deeds of nations long since sunk into obscurity, and its works bear existing testimony to the truth of history.

By the gigantic pyramids, by the lofty obelisks, and the stupendous temples of Egypt, we have genuine documents and ocular demonstration of the veracity of the historic page, which relates the numbers and the power of the mighty people that once inhabited the extensive shores of the prolific Nile.

* Plato de Leg. l. 3 & 6.

The Parthenon, the Erectheum, nay, all that remains of ancient Athens, bear witness to the refined taste of the Greeks as attributed to them by the historians and critics of antiquity. The Acropolis and its lovely structures vouch for Pausanias; the pyramids of Ghiza for the venerable father* of history; and Rome, "the eternal city," owes its most lasting celebrity to architecture.

By architecture too, we learn how painting and how sculpture flourished among the ancients; for it has not only preserved upon its walls, as in the temple of Tentyra, in the magnificent baths of the Roman emperors, and on the walls of Herculaneum and Pompeii, positive vestiges of their pencils:—but by ratifying (as it were) the truth of the historians' relation of their architecture, gives us a point whereon we may fix our belief in their descriptions of the powers of their ancient painters. Thus—the existing works of Phidias, Ictinus, Callicrates, and Mnesicles, prove the reality and the power of the highly and justly lauded productions of Zeuxis, Parrhasius, and Apelles, of which we have only written testimony.

* Herodotus.

Architecture has this manifest advantage over painting, which to the student in choice of a profession is by no means a contemptible one; namely—that while in painting one must be superlatively great, or positively contemptible; in architecture there are many grades below its highest, (which in sublimity yields not to painting,) wherein industry and talent, below the brilliancy of genius, may occupy a moderate station with much dignity and use to society.

Architecture has its infancy, and may be seen in its cradle as well as the other arts; but its first attempts are not so helpless as those of painting. Ælian* says it was no uncommon thing in those earlier essays of painting, for an artist to inscribe under his figures, “*this is an ox that is a horse; this is a man, that is a tree.*” Now surely there can be no occasion to inscribe on the infantine essays of architecture, this is a hut, that is a cave, or this is a house.

Now I am upon the advantages which architecture possesses, permit me to say a few words also upon its *dis*-advantages. Architecture is not, like painting, a *marketable* art. The

* Var. Hist. lib. x. cap. 10.

architect cannot, like the painter, or the sculptor, complete his works in private, and exhibit them in public ; he cannot carry a cottage under his arm, a villa in a hackney coach, or a palace on the more magnificent appendages of a porter's horse and two livery chairmen, to an exhibition for his credit or for sale. For him there is no British Institution for the sale of his works, for him there are no auctions with *public*, or more select and fashionable *private* views. His designs, without patrons, must lie neglected for years in his portfolios. The painter, without even a commission from a sitter, can paint a picture ; the sculptor can model or carve his statue or *basso-rilievo*, and without either employers or connexions, can carry his works for sale. The architect must calmly wait his employer's day.

It may be easier, I admit, to design a common house than to paint a decent picture ; yet the acquirements necessary to produce an accomplished architect are more *numerous* and more difficult of attainment than those required to form a painter ; hence, the world has produced fewer great architects than great painters.

Nothing is more necessary to the due understanding and to the proper study of archi-

ture, and to the formation of an architect, than a habit of application and industry. Without them, even the lowest departments of the art are not to be mastered. It is not a rapid growth that produces a sound and skilful architect, any more than a mushroom precocity, or a feline fecundity, are emblems of a great painter. It is not by occasional fits of application, by short starts of preparation, by numerous progenies of little works, performed in a little time and with less study,—sometimes discontinued, and again renewed by intervals,—that eminence is to be attained in either of these sublime and difficultly-attained arts. On the contrary, it is only by regular application, by a constant study of good examples, by able instructions, by deep and intense study of the elementary principles of each, with an uninterrupted practice solely directed to the object; grown up almost into a habit, and ready to be called into use at the shortest notice, and as it were with more arms than are required for the contest; it is only by sacrificing every comfort that aims at prevention, by having resolution to suffer nothing to impede our progress, by avoiding the dead sea of idleness and pleasure, that the professional man can be enabled,

even if blest with sufficient natural abilities, to shine in either of the three illustrious arts of painting, sculpture, or architecture.

Michelangiolo, when asked why he did not marry, said, his art was his wife, and his works were his children. Yet the powerful energy, and the commanding decision of character of that great man, who, in his eightieth year, could go early on a cold and frosty morning to the Colosseum, acknowledging he required yet to learn, (*ancora imparo,*) would not have suffered any domestic arrangements, or even *disarrangements*, to have prevented his studying, his practising, or his working at his art. They who rely alone on *their own genius*, as they vainly call it, without this heroic, this self-denying sacrifice to the deity of the arts, will find their road cloudy and darksome, and their end vainglory, frivolity, and nothingness.

Much more may easily be said on the advantages of architecture, and on the interesting nature of its studies; but I trust enough has been introduced to convince the unprejudiced.

An enlightened patronage of architecture, which of necessity includes an encouragement of all the arts, embellishes the names of mo-

narchs and princes with unfading lustre, equal to any and superior to most of their other acts. A great and good prince is rendered *yet more illustrious* by such encouragement; and the infamy of a bad one is gilded over to his contemporaries, and overpowered to posterity, by the brilliancy of its lustre. The bloody and drunken insanities of Alexander, by some called the Great, are shaded by his patronage and love of art; and the nameless atrocities of Hadrian are softened by his deeds in art almost to a name of repute; while the mild lustre of Titus receives a brilliant accession from the same causes. So is the tyranny of Pericles adorned and neutralized by his enlightened patronage of Phidias. The Parthenon has remitted *his* sins; and Hadrianopolis, with its tasteful structures, sheds rays of glory round the head of the otherwise contemptible and infamous patron and associate of Antinous. Architecture was held in such esteem by the Greeks, that none but the well-born were allowed to study it, and princes gloried in its practice. "If," as Sir Joshua Reynolds asserts, "the value and rank of every art" be "in proportion to the mental labour employed in it, or the mental pleasure produced by it," then must architecture rank very high indeed. "As this principle is ob-

served or neglected," our profession becomes either a liberal art, or a mechanical trade. In the hands of one man it makes the highest pretensions, as it is addressed to the noblest faculties, and becomes a matter of philosophy; while in those of another, it is reduced to a mere matter of ornament, and the architect "has but the humble province of" building elegant trifles.

Architecture is divided into two general or primary divisions—civil and military; but it is with civil architecture only that we have to do in this course. Civil architecture is again primarily divided into monumental, sacred, and domestic; and those again into their various subdivisions, as will be hereafter defined.

In attempting a sketch of the history of architecture among the most ancient nations of the world, the first steps are doubtful, and must be in a great degree hypothetical; for it is incorrect and unphilosophical to attribute the invention of architecture to any one ancient nation or people. On the contrary, it is indigenous to every country where human reason has in any degree developed itself. Architecture, like the productions of nature, assumes different forms according to the nature of the

climate, the wants it may superinduce, the nature of the soil, the building materials, and personal character of the human beings composing the various nations which practice it.

Among savage people, architecture as an art is scarcely known, and painting and sculpture are as rude as their manners. We find these arts, with music, dancing, eloquence, and poetry, in every country, and among every people which have arrived at the first degree of civilization; and mankind was certainly in this state in the earliest antediluvian times, after the families of Adam's immediate progeny settled themselves.

Among the most ancient people whose records have reached our times, are those who lived before the flood, and whose histories and actions are recorded in the books of Moses. The history of architecture, considered philosophically and as connecting itself intimately with the other arts, with science and with legislation, is, properly speaking, the history of the human mind. It bears so strong an impression of the character of the people by whom it has been cultivated, that an attentive examination of its origin and progress is the most effectual way to discover the genius,

the manners, and the mental characteristics of the various nations of the world. “The arts,” says Wieland, “under *the guidance of wisdom*, embellish, evolve, and ennoble mankind; art,” he says, “is the half of our nature, and without art man is the most miserable of animals.”

Among the antediluvians, architecture as an art cannot be supposed to have made much progress. The principal objects of these ancient people, whose times may be called the heroic or poetical period of the world, from their native simplicity of manners, must have been the chase, and other methods of providing food, without the labour of cultivation. Saroniatho* says, “that fishing was one of the earliest inventions which the ancients attributed to their heroes.” The Bible and Homer are full of the manners of our earliest ancestors. Fishing, hunting, the care of flocks, and, later, agriculture, were the employment of their monarchs and heroes—their shepherd kings; cookery, washing, making garments, and other domestic employments, of their women of rank, their princesses, and their queens.

The history of the ages before the deluge furnishes but few materials for the history of

* Apud Euseb. præp. Evang. l. i. c. 9, p. 35.

architecture.* Moses has related only those grand events with which it was necessary for posterity to be acquainted, and omitted all details which might only have been useful to gratify curiosity.

De Goguet is of opinion, that we may fix the date of the far greatest part of human laws, arts and sciences, posterior to the deluge, as the few traces of antediluvian knowledge of which we have heard, and which might have escaped that tremendous desolation, were afterwards greatly defaced and obscured, if not totally lost.

This important fact in the history of our globe (the deluge) is daily becoming more a matter of proof, from the continual discoveries of fossil remains. But let any one who may still doubt the historical veracity of this terrific visitation, which the ancient histories of all nations record, hear the opinion of our great philosopher Sir William Jones.

“ The sketch of antediluvian history, as given by most ancient historians of the race of Adam, in which we find many dark passages, is followed by the narrative,” says Sir William, “ of a deluge,† which destroyed the whole race

* De Goguet, Preface, vol. 1, p. x. † Ninth Discourse.

of man, except four pairs—an historical fact admitted as true by every nation to whose literature we have access, and particularly by the ancient Hindus, who have allotted a whole *purana* to the detail of that event, which they relate as usual in symbols or allegories. I concur most heartily,” he says, “with those who insist, that in proportion as any fact mentioned in history seems repugnant to the course of nature, or, in one word, miraculous, the stronger evidence is required to induce a rational belief of it; but we hear,” he continues, “without incredulity, that cities have been overwhelmed by eruptions from burning mountains, territories laid waste by hurricanes, and whole islands depopulated by earthquakes: if then we look at the firmament, sprinkled with innumerable stars; we conclude by a fair analogy, that every star is a sun, attracting like ours a system of inhabited planets; and if our ardent fancy, soaring hand-in-hand with sound reason, waft us beyond the visible sphere into regions of immensity, disclosing other celestial expanses, and other systems of suns and worlds on all sides without number or end, we cannot but consider the submersion of our little spheroid as an infinitely less event in respect of the immeasurable universe, than the de-

struction of a city, or an isle, in respect of this habitable globe. Let a general flood, however, be supposed improbable, in proportion to the magnitude of so ruinous an event, yet the concurrent evidences of it are completely adequate to the supposed improbability." The state of mankind immediately after this general deluge is clearly shown in the Mosaic history. The families which emerged from the ark, after paying their grateful adoration to the Deity who had preserved them to perpetuate their race, erected an altar of stones, and offered sacrifice thereon. This is one of the most ancient examples of post-diluvian sacred architecture on record, rude as it might have been.

It is easy to conceive the progressive improvements from this rude place of worship to a temple. First, the altar erected on the earth,—next a pavement round it to prevent the earth being sodden by the blood of the animals, and the wet offerings,—then a row of rude upright stones, equidistantly placed round it,—which, being covered over, preserve the sacrifices, priests, and offerings, from the rain and sun:—thus it becomes a primeval temple, with its roof, its cell, and its altar.

The family of Noah remained no longer united in one society than was necessary for

their increase and security. As soon as they were become sufficiently numerous, they dispersed themselves into the different regions of the earth, about a century and a half after the deluge. It, however, does not appear that it was their intention at first to separate permanently, though they were often obliged to part to seek subsistence. "With this view," says De Goguet, "they formed the design of building a city, and raising a tower in the centre of it to a great height, as a signal and point of re-union." For this purpose he attributes the erection of that vast structure called the Tower of Babel; whilst the best translators of the Hebrew Bible render the 4th verse of the 11th chapter of Genesis, "Let us build us a city, and a tower whose top may reach unto Heaven; and let *us make us a name*, lest we be scattered abroad;" giving the desire of perpetuating their celebrity as their motive for this great undertaking.

We learn the simple manners and customs of the ancient Israelites, and the nations in immediate contact with them; and Homer, in describing the manners of the Cyclops, gives a corroborating idea of the uncultivated state of many of the ancient nations. "The Cyclops," says the poet, "know no laws. Each

governs* his family, and rules over his wife and children. They trouble not themselves with the affairs of their neighbours, and think not themselves interested in them. Accordingly, they have no assemblies to deliberate on public affairs. They are governed by no general laws to regulate their manners and their actions. They neither plant nor sow. They are fed by the fruits which the earth produces spontaneously. Their abode is on the summits of mountains, and caverns serve them for retreats." This uncultivated, unsociable life could not be of long continuance with regard to a great part of mankind. So many motives must have concurred to induce families to associate and mingle with each other, that several of them must have united early. But as we have no certain monuments or records of this reunion and subsequent government of nations, and as there is no end of forming conjectures, we must proceed to such authentic documents as we possess.

The connexion of architecture, and the rest of the arts and sciences, with the laws, government and manners of various people, is a curious and useful subject of inquiry. Its relation to

* *Odyss.* l. ix. v. 106, et seq.

the history of the human mind is clear and indisputable, although it has been thought below the dignity of the philosopher and statesman, and that the arts were mere amusements and relaxations to superior minds. I shall not stop to controvert this fallacious doctrine, for it requires no denial. It was the mere subterfuge of a dogmatic connoisseur, when driven from his false positions by the knowledge of a philosophical and enlightened practitioner.

Architecture has taken its styles, its varieties, its colouring, if we may so call it, from the nations who successively invented or introduced it, and their moral characters as a people may be deduced from their national styles of architecture, as I will endeavour to show.

The first epoch in the history of architecture is that period before the deluge, a term of nearly 1700 (1655 exactly) years. That architecture must have been understood before the flood is clear from the length of time that had elapsed for the improvement of man, from the knowledge exhibited in the construction of the ark of Noah, and from other similar causes. "The children of Seth," says Josephus, "erected two pillars, one of brick and the other of stone, on which they engraved the

principles of astronomy." The making of bricks, the building with hewn stone, and the art of sculpture, here shown, are proofs of a high degree of civilization, and a knowledge of the arts and sciences. The people who could construct such a vast floating machine as a receptacle for a numerous family, with a pair of every species of living creatures, and with necessary articles of subsistence for a great length of time—a work which sets itself in competition with the floating castles of our days, that waft the riches of the world from pole to pole, could not but have made great progress in constructive architecture.

In the second age of the world, which is calculated from the building of the tower of Babel by the posterity of Noah, to the foundation of Athens by Cecrops, in the year before Christ 1556, many large cities were founded, and architecture consequently began to uplift itself into manhood. In the early part of this period, Nimrod began to exalt himself by laying the foundation of the Assyrian empire, and Nineveh, the celebrated metropolis of Assyria, was built. Nearly at the same time Troy was founded by Scamander; Mizraim, the son of Ham, led a colony into Egypt, and laid the foundation of a kingdom which

endured 1663 years ; and Cadmus, the reputed inventor of letters, with Moses, the great legislator, and Aaron, his brother, flourished.

In this early period the Assyrians cultivated the arts, and are celebrated as having excelled in that of architecture. This second epoch, or age, is peculiarly distinguished by the building of the tower of Babel, and by the design formed by the posterity of Noah, and in part executed, of building a city in the plains of Shinar.* According to some historians, Belus, known in the scriptures by the name of Nimrod, the first king of Assyria, was the reputed projector of this structure. He built afterwards, in the same place, the celebrated city of Babylon, where he arrogated to himself the honours of divinity. Ninus, his son, erected to him the first known temple, consecrated a statue to his memory, and ordered it to be worshipped, which is the first recorded instance of idolatry.

All historians agree that Babylon was a large and beautiful city. Pliny relates† that it was sixty miles in circumference, that its walls were two hundred feet high, and fifty thick ;

* Genesis, xi. 4.

† Plin. lib. vi. cap. 26.

and that the magnificent temple of Jupiter Belus was standing there in his time. Herodotus says, that it was four hundred and eighty furlongs in circumference; that it was full of magnificent structures, and celebrated for the temple of Belus; that it had an hundred gates of brass, which proves that the fusion and mixture of metals were known, and that other arts dependant on design were then practised.

This statue of Belus was constructed about two hundred years after the flood, and is the same idol mentioned in the scriptures under the name of Baal and Baal Phegor. This same Ninus was the founder of the city of Nineveh, of which Diodorus* says, the city was four hundred *stadia*, or, if reduced to English measure, fifty miles in circuit, and is described in the book of Jonah as an exceeding great city of three days journey.

In less than two hundred years after the flood, architecture was cultivated in Chaldea, China, Egypt, and Phœnicia. Moses† has preserved the names of several cities which Nimrod built in Chaldea. The Chinese, say the Fohi, enclosed cities and towns with walls.‡

* Diod. lib. xi. p. 65.

† Genesis, x. 10.

‡ Martini Hist. de la Chine, liv. i. p. 28.

Among the Phœnicians, Semiramis the wife of Ninus finished in this age the stupendous walls of Babylon, which were reckoned among the seven wonders of the world. This illustrious princess, to whom the administration of government was left by her husband, ascended the throne about 1700 years before Christ,* and is one of the first examples in history of a throne being filled by a female. Diodorus, and other ancient writers relate, that among the works executed by Semiramis,† she caused the images of all kinds of animals to be sculptured, in *rilievo*, on the walls of her palace, which were coloured after nature. These figures they say were more than four cubits high. In the middle, appeared Semiramis, piercing a tiger with her dart, and near her her son Ninias slaying a lion with his lance. In another part of the same palace, were the statues of Jupiter Belus, Ninus, Semiramis, and of her principal officers of state. These statues, they say, were of bronze. They further add, that three statues of massy gold, representing Jupiter, (whom the Babylo-

* Diod. lib. ii. p. 114, 120. Goguet, vol. i. p. 42.

† Goguet, vol. i. p. 167. Diod. lib. ii. p. 121, 122.

nians called Belus,) Juno, and Rhea, were erected by her, on the summit of a temple dedicated to Jupiter Belus, and erected by the command of Semiramis, in the middle of Babylon.

These works, however stupendous and magnificent they may appear, shrink into trifles when compared with that which the same author informs us this great Queen caused to be executed on the mountain Bagisthan.* This mountain, which, according to Diodorus Siculus, on one side presented a rugged rock, sixteen furlongs, or two English miles, in perpendicular height, she ordered to be sculptured into a group of colossal statues. Paolo Lomazzo (in his *Ideal del I del Pit.*) says, the mountain was seventeen furlongs in circumference, and was carved into a group of a hundred of her guards, and other of her subjects offering sacrifice to her. Compared with this, the scheme of carving Mount Athos into a statue of Alexander the Great is but as a molehill to a mountain. Valerius Maximus also gives an account of a prodigiously colossal brazen statue of this celebrated Queen, who

* Diod. lib. ii. p. 123.

died about 1750 before Christ, after reigning forty-two years, as the successor to her husband Ninus.

Many other similar works of grandeur are mentioned as having been constructed by this princess, of which the necessary limits of a lecture will not find room even for enumeration. Besides, it being well known* that there were several queens of Assyria named Semiramis, these authors may have attributed to the great Semiramis, the spouse of Ninus, what was probably executed in another age, and by some other princess of the same name.

From these several examples, founded on the authority of the most authentic historians, we may perceive that architecture flourished in a splendid manner even in these ancient days. None of these relations, magnificent and splendid as they appear; not even the walls of Babylon, the tower of Babel, nor the extent of Nineveh, a circuit of sixty miles, spreading over an area nearly six times the size of that of London, should surprise us into an unbelief, from their stupendous sizes; when we reflect upon the existing pyramids of Egypt, and

* Goguet, vol. i. p. 168; Cedrenus, p. 15; Conon apud Phot. n. ix. p. 428; Euseb. Chron. lib. ii. p. 80.

know that the great wall of China, also a work of high antiquity, is 1500 miles in length, forty-five feet in height, and eighteen feet in thickness, with towers of corresponding proportions, and reasonable distances.* Here, again, we find architecture bearing testimony to the truth of history. Many cities were built in Palestine, and the neighbouring countries, during the days of the patriarchs Abraham and Jacob. Tosorthes, the successor of Menes, the first king of Egypt, is said to have invented the art of cutting and hewing stones; and Venephes, or Cephrenes, had already constructed the first pyramid, which served as a model to the others, which were shortly afterwards erected.

Architecture, having thus been successfully practised among the Assyrians, was by them carried into Egypt, and other countries which they conquered. The Egyptian style of architecture is characterized by a solidity of construction, by an originality of conception, and by a boldness of form. The civilization of this people, and the consequent cultivation of the arts, commenced in Upper Egypt. The architectural remains of this portion of Egypt

* Bromley, vol. i. p. 115.

are more numerous, more characteristic, and more ancient than those of Lower Egypt, whose inhabitants, for a long period after the knowledge of architecture in Upper Egypt, lived in natural caves and excavations in the mountains. The excavations now remaining, and mentioned by travellers, are possibly of this period. The hieroglyphics and other figures which are sculptured in these caverns are of a style indicative of a later period than that of their first inhabitants.

All the Egyptian structures are not built of such imperishable materials as their pyramids, their obelisks, and their temples; for in many places have been found the ruins of palaces and common habitations, built with bricks, some of which were burnt, and others merely dried in the sun. The origin of all arts was very ancient in Egypt; their existing ruins would prove their skill in constructive architecture, hewing and polishing of the hardest stones, and a characteristic style of sculpture, independently of the testimony of historians. The earliest dwellings of all nations bear a general resemblance to each other; those of Egypt and Palestine were of reeds and canes interwoven,*

* Diod. lib. i. p. 52, Sanchon. apud Euseb. p. 35.

and are the types of their reeded columns. It is singular that there were houses of this description seen in Peru,* among a people whose vast constructions in many instances rival those of the Egyptians.

Wood or timber is a material so proper for building, that it was undoubtedly employed for this purpose, where it could easily be procured. In Egypt this material was peculiarly scarce, even for fuel,† and the natives were driven to other and less manageable materials.

The construction of their first buildings required but little preparation and little knowledge. We may judge comparatively of the knowledge of so ancient a nation by that of the Peruvians, before the arrival of the Spaniards in that country. By degrees the Egyptians improved in skill and industry; they substituted vitrified bricks and granite in the place of dried clay and mud, and raised buildings equally strong and magnificent.

The art of building with such immense blocks of stone as we find in the Egyptian buildings must have cost their first architects much thought and study. These immense masses

* Voy. au Pérou par M. Bouguer, p. 8, 10.

† Herodotus.

of such hard and ponderous materials, and the astonishing size of their columns, give their buildings an appearance of grandeur and simplicity, that even at first sight inspires ideas of wonder and delight.

But, upon inspection, a want of symmetry of proportion, and of elegance is apparent. The ornaments are often misplaced, ill-applied, crowded, and executed in a dry and hard style. The architecture of Egypt sprung rapidly to a certain degree of perfection, beyond which it never improved, because the political institutions of the country, and the attachment of the people to their ancient customs and manners, were averse from alteration or improvement. Neither were they likely to derive their architectural knowledge from other nations, when, according to Diodorus* and Strabo,† one of their first maxims was never to leave their own country; and one of their first political institutions to exclude all strangers from it: and least of all was it likely they should borrow from India, when the Indians left their own country as little as the Egyptians.

* Diod. lib. i. p. 78.

† Stra. lib. xvii. p. 1174, also Clemens Alex. Strom. lib. i. p. 354.

The earliest and most celebrated architectural works of the Egyptians are their excavations, their pyramids, and their obelisks. The pyramids and obelisks arose from the idea of flame, or the rays of light, the original emblems of the supreme principle of all things.* Of these latter works many were transported to Rome. Among their most surprising works was the Labyrinth, that immense assemblage of rooms, halls, and passages, of which Herodotus, Pliny, and Strabo, have left us ample descriptions; their canals, which however belong rather to public economy than to art; the monolithes, or chambers of one single stone, and the numerous and immense temples, covered with hieroglyphics, sculptured, painted, and decorated with rows of animals, sphinxes, or obelisks: their colossal statues, and other similar works, which will be noticed in their order.

Before coming to the details of the Egyptian buildings, I will first analyse and describe the character of their architecture. The characteristics or elementary principles of Egyptian architecture are, walls of a great thickness; roofs generally of a single block of stone, which

* D'Ancarville, vol. i. p. 55.

reached from one wall to another; a multiplicity of columns, some of which are square, some octangular, some with sixteen faces, and more round upon their plan. The proportions as well as the decorations of the columns vary in almost every example, and rarely approach the regularity and dignity of an order. They seldom had bases, and when they had, they mostly consisted of mere plain plinths, or a few simple water caves, enveloping a small portion of the bottom of the shaft. Their capitals varied considerably, sometimes being only a simple die or abacus, either plain or covered with hieroglyphics.* Sometimes they are ornamented with foliage; in some they resemble a vase; in others a bell reversed. Their most usual ornaments are palm leaves, and those which are the most decorated may be reckoned among the least ancient. In this style of architecture there is no frieze, nor properly speaking any architrave or cornice, and their substitutes are either; for something resembling them may be traced in the epistylia or beams of stone which reach from column to column.

Another characteristic of the Egyptian style is a peculiar narrowness of intercolumniation,

* See the works of Denon, Pococke, Belzoni, &c.

being often not more than three feet and a half. The want of the principle of the arch, which is mostly supplied by epistylia, or stone beams, or lintols, is also another and peculiar characteristic of this original style. Dr. Pococke thinks that the ancient Egyptians were not entirely ignorant of the construction of the arch, but does not give satisfactory proofs of his conviction; and the president Goguet, in his learned dissertation on the origin of laws, arts, and sciences, assumes, from their not using it in their temples, that they did not understand it. The proofs which the author gives in his third volume of monuments, drawn from Egypt, that the Egyptians were ignorant of the art of making vaults or arches, might as well be drawn to establish their *contempt* of this mode of construction, and their preference for the colossal masses they used to cover their apertures, and which reach from column to column and from wall to wall. The subject must remain conjectural; yet the nearest approaches, that I am at present aware of, to this scientific element of modern architecture, are exhibited in the entrance of the great pyramid at Memphis. It is but justice, however, to M. Goguet, to say that these discoveries are since the period of his writing.

Signor Belzoni, our most recent traveller in Egypt, who has seen more of what may be termed inedited Egyptian buildings, and whose works I have only seen since writing the above, agrees with my pre-conceived opinion of their complete knowledge of the arch, and appears to have produced ample proofs of this curious fact. He found Egyptian arches at Thebes, and one at Gournon, under the rocks that separate this place from the valley Beban el Malook.

However conjectural may have been the origin or rise of ornamental architecture, of this we are certain, that among the most ancient specimens with which we are at present acquainted and from which the moderns have most drawn, is the Egyptian. Its style bears all the marks of freshness of invention, drawn from their own peculiar materials and their own national symbols; and their authors deserve the characters of original inventors. It is in this portion of the globe, that those colossal wonders, those architectural monsters, the pyramids, are situate. It is needless to dwell upon a long description of these structures. The largest of the three, which are some leagues distant from Cairo, forms a square, each side of whose base is 660 feet; its external circuit being,

therefore, 2640 feet, and is nearly 500 feet in height.* As a general idea of this stupendous building, it is nearly the size at its base of the area of Lincoln's-Inn Fields, London, which has been said to have been made by its architect Inigo Jones of that size for the purpose of illustration, and its apex nearly one-third higher than the summit of the cross of St. Paul's cathedral. The summit of this largest pyramid at present finishes by a platform of about 16 or 17 feet square. This amazing mass of masonry is constructed with stones of an extraordinary

* The dimensions of the great pyramid differ extremely in different authors, as may be seen in the following table.

Ancients.	Height.	Width 1 side.
Herodotus	800 feet	800
Strabo	625	600
Diodorus.....	600	700
Pliny	708
Moderns.		
Le Brun	616	704
Prosp. Alpinus	625	750
Thevenot	520	612
Niebuhr	440	710
Greaves	444	648

Number of the layers or steps.

Greaves says.....	207	Pococke	212
Maillet	208	Belon	250
Albert Leivenstein	260	Thevenot	208

size, many of them being 30 feet long by four in height, and three in thickness.* Herodotus,† Diodorus,‡ and Pliny§ say, that the stones employed in building the pyramid were brought from Ethiopia and Arabia. This fact M. Goguet with much probability doubts; for “in the first place,” he says, “it is not likely that the kings of Egypt, having excellent materials at hand, should have unnecessarily expended immense sums to bring them from afar. Again, the stones of the pyramid have too near a resemblance to those which are found in the neighbourhood for us to imagine that they were not taken thence.|| Yet it is probable that the stones referred to by these ancient authors may have been the marble with which the outside of the pyramids were covered, and may have been procured from the neighbourhood of the Red Sea, and from Upper Egypt.

The origin of the pyramids, the causes of their erection, and by whom, are differently related; but Belzoni has, I think, set the question at rest by his interesting discoveries, and

* Herodotus, lib. ii. n. 124; Pietro della Valle, let. 11, tom. i. p. 224, 225. Maillet Description de l’Egypte, p. 224, 230, 231, 253.

† L. 2, n. 124. ‡ L. 1. p. 72. §. L. 36, sec. 17, p. 738.

|| Thevenot, tom. ii. p. 484, and Vansleb. Relat. d’Egypte.

proved that they were undoubtedly tombs of their founders. In a learned and interesting inquiry into Egypt and the Nile, from the ancient books of the Hindus, by Captain Francis Wilford, published in the third volume of Asiatic Researches, which our illustrious countryman Sir Wm. Jones admits removed the greatest part of that natural distrust and credulity which had taken possession of his mind, the able author says, "It is no wonder that authors differ as to the founders of these vast buildings, 'for the people of Egypt,' says Herodotus, 'held their memory in such detestation, that they would not even pronounce their names;' they told him, however, that they were built by a herdsman, whom he calls Philitius, and who was a leader of the *Pális* or *Bhils*, mentioned before."* However, it is more with their construction and architectival merits that we have to do in the present inquiry.

Herodotus, the father of Pagan history, records† the methods used for constructing these mountains of masonry, with an accuracy and probability, that leaves nothing to doubt, and shows how far they were advanced in mechanical science. This great historian, after

* Asiat. Res. vol. iii. p. 438. † Herod. l. ii. n. 124.

having gathered knowledge and experience in all the arts and sciences, cultivated and known in every part of Greece, (of which country he was a native,) Thrace, and Scythia, travelled also in pursuit of knowledge to Arabia, Palestine, and Egypt, where he carefully viewed and described the chief curiosities, both of art and of nature, and the most remarkable places which he visited.

He relates, that a hundred thousand workmen were employed at the same time in the construction of this pyramid;* but Diodorus† and Pliny‡ say, with less probability, three hundred and sixty thousand: they were relieved by an equal number every three months. Ten years, he reports on the authority of the Egyptian priests of those days,§ were employed in hewing and conveying the stones, and twenty more to finish this enormous structure, which contained, in its inside, galleries, chambers, and a well.

||“This pyramid,” says Herodotus, from actual

* Herodot. lib. ii. n. 124. + Diod. lib. i. p. 73.

‡ Plin. lib. xxxvi. sect. 17. § Herodot. lib. ii. n. 124.

|| *Fuit autem sic extracta hæc pyramis in speciem graduum quas quidam scalas quidem arulas vocant. Postequam eam primo talem fecerant, attolebant reliquos lapides machinis factis e brevibus lignis ab humo in primum ordinem*

inspection, "is quadrilateral, every face contains eight plethrons* in length, and the same measure in height. All the stones are thirty feet long, well squared, and jointed with the greatest exactness, rising on the outside by a gradual ascent, which some call stairs, and others little altars, contrived in the following manner; namely, when they had laid the first range of stones, they carried other stones up thither by a short engine of wood, and from thence to the several orders or courses of stone, or perhaps the engine was but one; and being easily managed, might be removed as often as they placed a stone; "for I have heard," he says, "the relation both ways. The highest were first finished, and the rest in their proper order; but last of all, those that are lowest

graduum levantes. Ubi ad hunc lapis ascenderat alteri machine imponebatur quæ in ipso primo ordine stabat. Ab hoc deinde in alterum ordinem trahebatur super alteram machinam. Nam quot erant ordines graduum totidem quoque machine erant, sive etiam eandem machinam quæ erat una et facilis ad ferendam, transferebant ad unumquemque ordinem quoties saxum exemerant..... Effecta sunt igitur ita prima ejus quæque altissima, deinde sequentia absolverunt, novissima vero quæ solo sunt juncta et infima peregerunt."—Herod. Euterpe, 2, 125.

* Six plethrons make a stade, a stade is equal to 125 geometrical paces, or 625 feet.

and nearest the ground." Some commentators on this text think that this finishing refers to the marble casing, but I am rather of opinion that it refers to the exterior facing of the stone steps.

Captain Wilford, whom I have before quoted, in his very curious dissertation on this subject, from the ancient books of the Hindus, says, they are called "three stupendous mountains of gold, of silver, and of precious stones:" and that they might have been called the three mountains of gold, of silver, and of precious stones, in the hyperbolical style of the east; but he rather supposed from this very facing: that the first was said to be of *gold*, because it was coated with yellow marble; the second of *silver*, because it had a coating of white marble; and the third of *jewels*, because it excelled the others in magnificence, being coated with a beautiful spotted marble of a fine grain, and susceptible of an exquisite polish.*

Diodorus† says, that they accomplished the building of the pyramids by means of terraces disposed in manner of an inclined plane; and Pliny relates the same upon his authority.

* Savary, vol. i. p. 246. Asiat. Res. vol. iii. p. 438.

† Diod. lib. i. p. 73. Plin. lib. xxxvi. sect. 17.

The account of Herodotus is, however, in every respect entitled to most credence. On this pyramid, says Herodotus,* was an inscription, in Egyptian characters, declaring how much was expended in radishes, onions, and garlick for the workmen, "which the interpreter," says he, "I well remember, told me amounted to no less than the sum of sixteen hundred talents of silver."

If, however, these pyramids were faced with marble, and ornamented with sculpture, and if these tremendous masses of masonry were but cores to ornamental structures, such as I have just described; they may, nay they must have been, particularly if their apexes were crowned by obelisks, the grandest architectural works ever produced by man.

The relations of the ancients concerning the galleries and chambers of this pyramid have been singularly confirmed by modern travellers, more particularly by the enterprising Belzoni, whose researches into Egyptian archaiology do credit to modern discoveries in art and science.

At a small distance from these pyramids,

* Herod. lib. ii. n. 125. Diod. lib. i. p. 73. Plin. lib. xxxvi. sec. 17, p. 738.

and about a quarter of a mile from the banks of the Nile, is another astonishing production of this wonder-working people:—the monstrous figure called the sphinx of Ghiza, the face of which is that of a woman, and the body that of a lion. This extraordinary figure is said to have been the sepulchre of their king Amasis. It is of one entire stone, and is said to have been cut out of a solid rock. Till the time of the French invasion of Egypt, little was to be seen of this celebrated figure except the head, the rest being buried in sand, which they cleared away in a considerable degree, and laid much of it open to view. From recent measurements, calculated when cleared from the sand with which it is almost enveloped, it is about a hundred feet in length and forty feet wide. Dr. Pocock, and M. Goguet, after him, reckoned the head to be twenty-six feet high, thirty-five feet round, and fifteen feet from the ear to the chin. Pliny,* as usual, exaggerates† prodigiously the proportions of this sphinx, when he says that in measuring the circumference of the head at the forehead it is about one hundred and two feet in compass, and one hundred

* Plin. lib. xxxvi. sect. 17. † Goguet, vol. iii. p. 76.

and forty-two in height. Paul Lucas* gives the head as one hundred feet in compass, and about seventy feet from the chin to the top of the forehead.

Captain Cabillia,† who pursued his researches into these antiquities a little before the enterprising Belzoni, succeeded with great labour in uncovering the front of the great sphinx. He found a small temple between the two paws, and a large tablet of granite on its breast. The tablet is adorned with several figures and hieroglyphics, and two representations of sphinxes are sculptured on it. Before the entrance into the small temple was a lion, placed as if to guard the approach. From the base of the temple to the summit of the head he gives as sixty-five feet; the legs of the sphinx are fifty-seven feet long from the breast to the extremity of the paws, which are eight feet high. The captain also found a Greek inscription of the time of the Ptolemies, one alluding to the Emperor Antoninus, and another to Septimus Severus.

The sphinxes of the Egyptians, and all their combined figures of animal creation, took their

* Voyage to the Levant, vol. i. p. 46.

† Belzoni's Egypt, p. 138.

origin from the fable of the mother of the Scythians, who in her intercourse with Jupiter produced an offspring* half females and half serpents.

Next in point of celebrity, and among the most considerable and singular works which have ever been imagined, must be reckoned the Egyptian labyrinth, which the Greeks imitated among others in the well known labyrinth of Crete, by Dædalus. It has been doubted, if any ruins of this wonderful structure have been discovered, but my before quoted authority, Captain Wilford, asserts,† that its ruins are still to be seen near the lake Mœris, at a place which the Arabs have named the kasr or palace of Kárún, whom they suppose to have been the richest of mortals. We must, however, rely upon the credit of ancient authors for any account of it; and the authority of Herodotus, for the reasons I have before given, is again the best we can refer to upon this head. There is great diversity of opinion upon the period to which this much-boasted edifice ought to be attributed: Herodotus‡ attributes

* D'Ancarville, vol. i. p. 115.

† Asiat. Res. vol. iii. p. 426.

‡ Herod. lib. ii. n. 148.

its construction to the twelve kings who reigned at the same time, about six hundred and eighty years before the Christian æra. Pomponius Mela* agrees in most points with Herodotus, and these two authors give a tolerably clear idea of the labyrinth of Egypt.

This edifice, Herodotus, who had visited it and examined it very closely, affirms to have surpassed every thing that he could have conceived. Within one and the same circuit of walls it contained twelve magnificent palaces, regularly disposed and communicating with each other. These palaces contained three thousand halls, twelve of which were of a particular form and beauty.† Half of these halls, or chambers, were interspersed with terraces, and ranged round the twelve principal halls, and communicating with each other, but by so many turns and windings, that, without an experienced guide, it was impossible to escape wandering. The other half were under ground, cut out of the rock, and said to be used for the sepulchres of their kings. Herodotus assures us, that he visited all the apartments above ground; but those which were subterraneous

* Pomp. Mela de situ orbis, 8vo. Lugduni Batavorum, 1722.

† Herod. lib. ii. n. 148.

they would not, from motives of superstition, permit him to enter.* Captain Wilford† thinks the various apartments under ground to have been used for depositing the chests or coffins of the sacred crocodiles, called sukhus, or sukkis, in old Egyptian,‡ and soukh to this day in Coptic, or the vernacular language of Egypt. The halls had an equal number of doors, six opening to the north and six to the south, and at each angle of the external wall of the labyrinth was erected an immense pyramid, for the sepulchres of its founders. The whole building of the labyrinth, walls, and ceilings, were of white marble, and exhibited a profusion of sculpture.§ Each of the before mentioned twelve halls or galleries were supported on columns of the same marble. This building, or rather city of palaces, is also mentioned by Diodorus Siculus, who thinks it was nothing but a grand cemetery for the Egyptian monarchs and their families; by Strabo and by Pliny, who, however, only confirm the descriptions of Herodotus.

* Herod. lib. ii. n. 148.

† Asiat. Res. vol. iii. p. 425.

‡ Strabo, b. xvii. p. 811. Damascus Life of Isidorus.

§ Herod. lib. ii. n. 148.

The next striking feature in the ancient architecture of Egypt is their obelisks.

OBELISKS have generally been considered as peculiarly Egyptian, and of Egyptian origin; yet, if what Diodorus* says be true, it must have been in Asia and not in Egypt that they took their rise. This author speaks of a pyramidal spire, erected by the commands of Semiramis on the road to Babylon, which was, according to him, of a single stone of one hundred and thirty feet in height, and each side of its base, which was square, was twenty-five feet broad. Pliny,† on the contrary, asserts, that the idea of this species of monument is due to the Egyptians, and that a king of Heliopolis, called Mestres, was the first who caused one to be raised. There are so many doubts as to the period when this monarch flourished, and so many agreements between what Pliny says of Mestres, and what Herodotus, Diodorus Siculus, Isidorus,‡ and other historians, have related of the successor of Sesostris, that the learned and investigating De Goguet§ presumes

* Diod. lib. ii. p. 125, 126.

† Plin. lib. xxxvi. sec. 14, p. 735.

‡ S. Isidori omnia Opera, lib. xviii. c. 31, p. 159, in fo. *Coloniæ Agrippinæ*, 1617.

§ Goguet, vol. ii. p. 131.

that Pliny was mistaken, and that we ought to look upon Sesostris as the first who raised obelisks.

Be this as it may, the Egyptian monarchs and people appear to have had a great taste for obelisks. The names of all who are known to have erected them would be here only a dry catalogue of names, which may all be found in the works of the elder Pliny.*

Two of the principal of these obelisks were those which were erected by Sesostris, with the design of communicating to posterity the extent of his power, and the number of the nations he had conquered.† These obelisks were each of one immense piece of granite, and were a hundred and eighty feet high.‡ Augustus, according to the report of Pliny,§ transported one of these obelisks to Rome, and placed it in the Campus Martius. Of the three Egyptian obelisks now in Rome, doubts have been raised whether either of them are of those raised by Sesostris, on account of their much smaller height. The height of that now by the fountain of the Piazza del Popolo is seventy-four feet, without its

* Plin. i. xxxvi. sec. 14, p. 735.

† Diod. lib. i. p. 67.

‡ Ibid.

§ Plin. lib. xxxvi. sect. 14, p. 736.

modern pedestal; that of the Vatican, in front of St. Peter's, seventy-eight feet, and that on Trinita de' Monti, forty-five feet, without their pedestals; while those of Sesostris were of the enormous altitude of one hundred and eighty feet. If the two larger be the same, it is probable they were broken shorter in their fall. The obelisk of the Piazza del Popolo is that which was brought to Rome by Augustus, after being spared from the ravages of Cambyzes, from respect to its origin, at the time when that furious prince put all to fire and sword in Egypt, and spared neither palaces, nor temples, nor those superb monuments, which, ruined as they are, are still the admiration of travellers. When this conqueror had rendered himself master of Heliopolis, he gave up the whole city to the flames; but when he saw the fire approach this obelisk, he ordered it to be immediately extinguished. From the place where it was erected by Augustus, it was removed to its present situation by order of Sextus the Fifth, in 1589, under the direction of the Cavalier Fontana, who also designed the fountain which accompanies it, and its pedestal. The one now in front of St. Peter's is also said to be one of those erected at Heliopolis, by Sesostris, and was brought

to Rome by Caligula in a vessel, the largest then ever seen upon the sea, and which was afterwards sunk to form the port of Ostia.* That emperor erected it in his circus at the Vatican, which was destroyed by Constantine the Great, to build the first basilica of St. Peter's; but he left the obelisk standing in the place now occupied by the sacristy of St. Peter. It was removed at an expense of nearly £10,000 sterling, in 1586, by Sextus the Fifth, to its present situation, nearly a century before the construction of the colonnade which surrounds it. Other historians† say it was brought over by the Emperor Constans, the son of Constantine the Great. This may probably refer either to the obelisk of the Trinita de' Monti, or that of the Monte Cavallo.

Having briefly investigated the architecture of Middle and Lower Egypt, and pointed out their leading characteristics, I shall proceed to the monumental architecture of the Thebais, or Upper Egypt, which will not detain us long, although its former magnificence was very considerable. It is the most southerly part of Egypt, nearest to Ethiopia, is named

* Plin. lib. xxxvi. p. 736, and lib. xvi. c. 40, p. 35.

† Pliny, Ammianus Marcellinus, Marsham, &c.

from its principal city, Thebes, and was nearly as large as the other two parts of Egypt together, including in its boundaries all the country on both sides of the Nile down to Heptanomis.

At the period of the Trojan war, Thebes was reckoned the most opulent, and the best peopled city in the universe.* Among the principal edifices of the Thebais was the magnificent palace of Memnon, which, according to Strabo, stood in the city of Abydus, the second city in Egypt after Thebes. This author informs us, that Abydus stood about seven miles and a half to the west of the Nile; that a celebrated temple of Osiris was near to it, and the magnificent palace of Memnon;† that it was famed also for a well or pool of

* Iliad, lib. ix. v. 381, &c. Odyss. lib. iv. v. 126, 127.

† Lieut. Wilford, whose excellent paper in the Asiatic Researches, on Egypt and the Nile, from the ancient books of the Hindus, I have mentioned more than once, says, in corroboration of my opinion of the affinity between the ancient Egyptians and Hindus, that he is not "disinclined to believe that the famed statue of MEMNON in *Egypt* was erected in honour of MAHIMAN, which has Mahimna in one of its oblique cases, and the *Greeks* could hardly have pronounced that word otherwise than MAIMNA or MEMNA. They certainly used *Mai* instead of *Maha*; for Hesychius expressly says Μαί, μεγάλη. Ἰνδοί; and *Mai* signifies *great*, even in modern Coptic."—Asiat. Res. vol. iii. p. 415.

water, with winding steps all round it; that the structure and workmanship of the reservoir were very singular, the stones used in it of an astonishing magnitude, and the sculpture on them excellent.*

Another principal structure, which graced this portion of Egypt, was the palace of Ptolemy, at Ptolemais. Under the Ptolemies, the style of architecture in Egypt experienced a complete revolution, and their buildings approached the style of the Greeks, yet never assumed the noble and pure style of those whom they attempted to imitate. These works were probably executed by some of the Greek architects called into Egypt by the Ptolemies and their successors. This conjecture appears the better founded, as a modern traveller† describes a temple which he had seen of the Corinthian order; and further observes, in speaking of a palace which he believes made part of ancient Thebes, that the capitals of the columns were of the composite order, highly finished.‡

The chief pride of Upper Egypt was, as I have said, its metropolis, the celebrated city of Thebes, distinguished from the Thebes in Bœotia

* Strabo, lib. ix. p. 434, 438.

† Granger, p. 38, 39.

‡ Ibid. p. 58.

by the epithet Hecatonpylos, from its hundred gates. It was not only the most beautiful city in all Egypt, but is supposed by many ancient writers to have surpassed every other of its time in the whole world,* as well for the splendour of its buildings, as for extent and the number of its inhabitants. Homer says† that Thebes was able to furnish twenty thousand chariots of war, by which we may judge of the number of inhabitants which it contained. Tacitus relates‡ that, when Germanicus visited its magnificent ruins, there were still to be seen, on ancient obelisks, a pompous description, in Egyptian characters, of the wealth and grandeur of the place. From the account of an elderly priest who interpreted the hieroglyphics, it appeared that Thebes, at one time, contained within her walls no less than seven hundred thousand men capable of bearing arms. The object, however, which most concerns my present inquiry is its buildings. Its four principal temples were of an immense size and of a singular beauty of workmanship. The gold, ivory, and precious stones, with which they were decorated, were stripped and carried away by

* Diod. lib. i. p. 54.

† Iliad, lib. ix. v. 383.

‡ Tacitus, lib. ii. c. 60.

the Persians, when Cambyses conquered and ravaged Egypt. Their domestic architecture must have arrived to a high degree of perfection, for Diodorus says* the houses of private persons in Thebes were four and five stories in height, which proves the knowledge of floors, stairs, and other necessary mechanism of storied dwellings. At Cnuphis, another city of the Thebais, so called from the god of that name, was a magnificent temple dedicated to that idol. At Carnack, a large city near Thebes, there are still the remains of a superb temple of Jupiter, now the most perfect in that part of Egypt. The magnificent temple of Apollo, at Apollinopolis, was 170 feet long, 180 broad, and 70 high, as appears by the ruins, which are still extant. The inhabitants of Dandera, or Tentyra, were great worshippers of Isis and Venus. From the existing ruins it appears that the temples of this city were more beautiful and splendid, and of a better style of art and workmanship, than any other now remaining in Egypt. Dr. Pocock, Captain Norden, Paul Lucas, Granger, Maillett, Capas, and latterly Denon, the French architect and antiquary, have been very diffuse and enthusiastic in their descriptions of Tentyra.

* Diod. lib. i. p. 54.

Denon was so enraptured when he stood beneath the portico of the temple of Isis, at Tentyra, that he exclaimed, "I thought myself, nay I really was, in the sanctuary of the arts and sciences. I was agitated by the multiplicity of objects, amazed by their novelty, and tormented by the fear that I should never behold them again." The extent of this temple was such, that the Arabs had formerly a village on its roof, the ruins of which are still to be seen. A more superb illustration is not in existence than the exquisite and elaborate work of Denon and his associates, on Egyptian architecture and antiquities. Belzoni also says, that, on his arriving before this temple of Isis, he was at a loss for some time to know where to begin his examination. The numerous objects before him left him for a while in a state of suspense and astonishment. In his recent work he says,* "On the 19th, early in the morning, my curiosity was at a high pitch, the noted temple of Tentyra being the only thought I had in my head. Accordingly, we set off on asses, as usual, and proceeded to the ruins. Little could be seen of the temple till we came near to it, as it is surrounded by high mounds of rubbish of the old Tentyra. On our arriving before it I

* Belzoni's Egypt. p. 33.

was for some time at a loss to know where I should begin my examination. The numerous objects before me, all equally attractive, left me for a while in a state of suspense and astonishment. The enormous masses of stone employed in the edifice are so well disposed, that the eye discovers the most just proportion every where. The majestic appearance of its construction, the variety of its ornaments, and, above all, the singularity of its preservation, had such an effect on me, that I seated myself on the ground, and for a considerable time was lost in admiration. It is the first Egyptian temple the traveller sees on ascending the Nile, and it is certainly the most magnificent. It has an advantage over most others, from the good state of preservation it is in; and I should have no scruple in saying, that it is of a much later date than any other. The superiority of the workmanship gives us sufficient reason to suppose it to be of the time of the first Ptolemy, and it is not improbable, that he, who laid the foundation of the Alexandrian library, instituted the philosophical society of the museum, and studied to render himself beloved by his people, might erect such an edifice, to convince the Egyptians of his superiority of mind over the ancient kings of Egypt, even in religious

devotion. This is the cabinet of Egyptian arts, the product of study for many centuries ; and it was here that Denon thought himself in the sanctuary of the arts and sciences. The quadrangular form of the capital (as shown in the annexed cut) first strikes the eye. On each face, there is a colossal head of the goddess Isis with cow's ears. They are all mutilated ; yet notwithstanding this disadvantage, and the flatness of their form, there is a simplicity in their countenance which approaches to a smile. On all the walls, columns, ceiling, or architraves, there is no where a space of two feet that is not covered with some figures of human beings, animals, plants, emblems of agriculture, of religious ceremony."



There are few subjects on which men of learning and taste have differed more than upon the Egyptian school of art. Some raising it to the skies, others scouting it as the barbarous of barbarism. The learned French antiquary, De Gouget, and his followers, treat it with the utmost contempt. Denon, we have just heard, was a warm admirer of its beauties. Sonnini, in his interesting Travels, says, "We soon

reached Carnack, a miserable village, whose cottages would serve to heighten the magnificence of the splendid ruins which surround them, if there were any thing in the world to be compared with the remains of Thebes, that famous city of antiquity which was celebrated by Homer. Luxor, another village, built at the southern extremity of the seat which this illustrious city held on this side of the river, lies about a league farther off. It would have required more time than I had to spare, and more safety than was to be found in this soil, covered over with ruins and highway robbers, to have minutely examined relics which immortality had preserved amid the shock of ages and the rage of barbarism. It would be no less difficult to describe the sensations which the sight of objects so grand, so majestic, raised within me. It was not a simple admiration merely, but an ecstasy which suspended the use of all my faculties. I remained for some time immovable with rapture, and felt inclined more than once to prostrate myself, in token of veneration, before monuments, the rearing of which appeared to transcend the strength and genius of man.”*

* Sonnini's Travels, vol. iii. p. 234.

Another extract from the same animated writer so completely defines the leading characteristics of Egyptian architecture, that I will venture to quote it. "Obelisks; colossal and gigantic statues; avenues formed by rows of sphinxes, and which may still be traced, although the greater part of the statues are mutilated or concealed under the sand; porticoes of a prodigious elevation, among which there is one of the height of a hundred and seventy feet, by two hundred feet in breadth; immense colonnades, the pillars of which are twenty and some thirty-one feet in circumference; colours still wonderful on account of their brilliancy; the granite and marble lavished on the buildings; stones of high dimensions supported by capitals, and forming the roof of these magnificent edifices; in a word, thousands of columns overthrown, occupy a space of a vast extent."*

The eloquent Bossuet, in his elaborate Discourse on Universal History, is no less descriptive and animated. "The works of the Egyptians," he affirms, "were made to resist the effects of time; their statues were colossal, their columns were immense. Egypt aimed at vast

* Sonnini's Travels, vol. iii. p. 235.

objects, and sought to strike the eye at a distance, but always gratifying it by justness of proportion. Temples and palaces, to this day almost entire, where these pillars and statues are immovable, have been discovered in the Thebais. One palace above all is admired, whose remains seem to have subsisted only in order to efface the glory of all the greatest productions of human power and skill. Four alleys extending farther than the eye can follow them, and terminating at each end in sphinxes, of a composition as rare as their size is remarkable, serve as avenues to four porticoes, whose height astonishes the beholder. What magnificence and what extent! Indeed of all those who have described the prodigious edifice, no one has had time to make the tour of it, nor are they even certain of having seen the half of it: but all they did see was surprising.

“A hall, which apparently stood in the middle of this superb palace, was supported by one hundred and twenty columns of six fathoms in thickness, and lofty in proportion, intermingled with obelisks, which so many ages have not been able to lay low. Even colours, which yield the soonest to the power of time, still endure amid the ruins of this wonderful edifice,

and preserve their vivacity; so well did Egypt know how to impress the character of immortality on all her works.”*

After all, the Egyptian style is monotonous, sombre, heavy, and unfit for modern adoption; and if studied exclusively, till friendship for antiquity begets love for ugliness, destructive of a pure taste. What made an excellent parlour in Egypt would be a delightful coal-cellar in England. From the examples and works that I have quoted, all that is necessary may be gathered of the Egyptian style of architecture; so interesting to the antiquary, so delightful to the traveller, and bearing such testimony to the truth of history in the earliest periods of the world. Although the lively Frenchman Sonnini says, that before it “the so much boasted fabrics of Greece and Rome must come and bow down;”† yet, when it is calmly investigated and brought to the test of judgement, it will not bear a momentary comparison with either, for chasteness, real beauty, or true sublimity.

* Bossuet's Disc. on Univ. Hist. part iii. sect. 3.

† Sonnini's Travels, vol. iii. p. 235.

LECTURE II.

Architecture considered as an Art. Its Types and Prefigurations. On Imitation, legitimate and false. The Art investigated among the Nations of India, the ancient Hindus and other Eastern People. Excavations in Salsette, Ellora and Elephanta; their Use and Origin considered. Analysis of the Eastern Styles of Architecture, and Investigation of their constituent Elements. Persepolitan, Phœnician, Hebraic, and Chinese Architecture, with their Characteristics.

LECTURE II.

HAVING, in my last Lecture, briefly explained the elements of architecture among the Egyptians, I shall now proceed to the development of the art among other nations which were nearly contemporary with that ancient and celebrated people; whose deficiencies in taste, when compared with Attic simplicity and elegance, were more than compensated by those important inventions which owe their origin to them: which have been the foundations of the art, and which have rendered all subsequent ages eternally their debtors, more particularly for their cultivation of geometry and architectural construction.

Architecture is an art purely imitative, and its three leading types or prefigurations are *the cavern*, as exemplified in the Egyptian, the Indian, and their like; *the tent*, as in the Chinese and its species; and *the cabin*, or wooden hut, as displayed in the Greek and its imitators; that is to say, that the Egyptians, the Indians, and their like, imitated in their buildings their ancient excavations; that the

Chinese, in their pagodas and other public buildings, imitated their tent ; that the Greeks imitated and refined carpentry in their marble temples ; that the Romans imitated the Greeks ; that the early architects in England imitated the Romans ; that we of the present day (the architect of the new street excepted) imitate the Greeks almost to a servile pedantry ; and that the architects misnamed Gothic imitated their primitive places of worship, their sacred groves.

The *cavern* (or Egyptian and Indian style) is dark, heavy, and monotonous. The *tent*, or Chinese style, light, feeble, and fragile. The *cabin*, or Greek style, (which will be explained in its proper place,) is at once solid and light, is susceptible of being made more or less solid or light, according to necessity or required character, is the richest in its combinations, and that which unites in itself, in the highest degree, the advantages of solidity and an infinite agreeableness of variety. Of the elements of the hut, or Greek style, Algarotti says, in his “ Saggio sopra l’Architettura,* that “ it is the material the most capable of furnishing the art with the greatest number of profiles, modifications, and varied ornaments ;” which

* Opere del Conte Algarotti, tom. iii. Venezia, 1791.

said profiles, modifications, and varied ornaments, the Greeks have indurated, sublimed, and immortalized ; while the Romans debased, lowered, and degraded them below even their original types.

There are factions in art as well as in politics; and it may be but candid to declare thus early that I am of the Greek faction.

While I am upon the subject of that *imitation* which is essential to the character of a pure style in architecture, an imitation which is by no means destructive of legitimate invention, I shall take leave to offer a few words in elucidation.

By *imitation* I do not mean that servile counterfeiting of an original, so much the character of some of our modern Greeks, who copy the very fractions of lines and profiles instead of composing in the same spirit, BUT, that bold pursuit of a sublime original, by parallel images and examples, sometimes more refined, but never below their type, which distinguishes true genius, cultivated and improved by practice and study, from the common herd of lineal copyists of modules, of minutes, and of lines. Such a free imitation as the *Eneid* is of the *Iliad*; such a bold and original imitator as Milton is of Homer and of Virgil; such imita-

tions, in short, as bear the marks of real genius, "that quality," says Dr. Johnson, "without which judgement is cold and knowledge is inert: that energy which collects, combines, amplifies, and animates."

There are two methods by which a people can imitate the architecture of another country; the one true and the other false. The true mode is less an imitation than an adoption, and consists in receiving as an alphabet, in their entire shape, the system, the rules, and the taste of a style of architecture. It is thus that the Romans adopted the architecture of the Greeks, or perhaps I should say of the Etruscans, which was incontestibly the same. It is thus also with the nations of modern Europe, who, abandoning the Gothic and the incongruities of the middle ages, have appropriated the Greek and Roman styles by legitimate adoption.

It was after this true mode that Palladio, by his imitations and inventive restorations of Roman magnificence, has founded a legitimate and splendid school. It was thus that Michel-angiolo fairly imitated the Pantheon of Agrippa in his tremendous cupola of the Vatican. And it was thus that our illustrious and neglected countryman, Wren, whose transcendent talents

I hope, ere long, to display to the public,* rivalled and surpassed in purity of taste and scientific construction the basilica of St. Peter's at Rome, the work of more than twenty architects,† supported by the treasure of the Christian world and by the protection and under the reigns of twenty successive Popes,‡ in his unrivalled work of St. Paul's, London; that glorious but unfinished monument of the piety and magnificence of our ancestors.

Such imitations are not plagiarisms, but skilful adoptions or adaptations, bearing proofs of legitimate and inventive talents. “Genius,” says Reynolds, “at least what is generally so called, is the child of imitation; it is in

* In a life of that illustrious man, on which I have been engaged for some time past, and have nearly completed.

† Bramante, G. di San Gallo, Raffaello, Balthazar Peruzzi, Antonio Sangallo, Giocondo, Michelangiolo, Giulio Romano, Domenico and Giovanni Fontana, Giacomo della Porta, Carlo Maderno, Luigi Cigoli, Borromini, C. Rainaldi, Bernini, Fontana, Vignola, Pirrho Ligorio, Fillippo Ivara, and Antonio Cannevari.

‡ Julius II. Leo X. Adrian VI. Clement VII. Paul III. Julius III. Marcellus II. Paul IV. Pius IV. Pius V. Gregory XIII. Sextus V. Urban VII. Gregory XIV. Innocent IX. Clement VIII. Leo XI. Paul V. Gregory XV. and Urban VIII.

vain to endeavour to invent without materials on which the mind may work, and from which invention must originate. Nothing can come of nothing.”*

The other or false mode of imitation is plagiarism and downright theft, with not even that ingenuity to conceal it which among the Lacedemonians procured pardon for the thief. It consists, as it were, in importing by wholesale, such portions of a foreign or ancient style as may appear suited to the purposes of its importers, and converting them to their own use, not as their originals would have done in their time and place, but forcibly torturing ancient art to modern uses. These are mean copiers and importers of architecture, common borrowers; the others, liberal adopters of the great works of the great masters of our art, from whom “the modern arts were revived, and by whose means they must be restored a second time.” “However it may mortify our vanity, says Reynolds, “we must be forced to allow them (to be) our masters; and we may venture to prophesy, that when they cease to be studied, arts will no longer flourish, and we shall again relapse into barbarism.”†

* Discourse vi.

† Ibid.

It was not in this way that the Greeks borrowed the idea of the Corinthian capital from the Egyptians. They boldly adopted and naturalized it, and with Spartan skill concealed the circumstance, and gratified their natural vanity in giving credence and currency to the ingenious hypotheses of Callimachus and the votive vase. The primitive types of the two capitals are the same ; the original of each is a vase surrounded by foliage and covered by an abacus, and a verbal description of the two would nearly assimilate. Yet, in the essentials of a national style, they widely differ. The Egyptians used the flowers and plants of Egypt, and the Greeks those of Greece.

If, however, Grecian architecture be, as is often asserted, borrowed, adopted, or stolen, from that of the Egyptians, the Greeks have most gorgeously embellished their robbery ; and if from their own huts and cabins, the metamorphosis of the cabin into the temple is as rapid and complete as that of the cottage of Baucis and Philemon, in the metamorphoses of Ovid.

“ *Illa vetus, dominis etiam casa parva duobus
Vertitur in templum : furcas subiere columnæ.*”

Ov. Met. lib. viii.

These resemblances and differences between

the Egyptian and the early Greek styles will be further attended to and elucidated when we come to investigate the architecture of the ancient Greeks.

Thus I have ventured to give my opinion upon what appears to me the true and only method in which the imitation of foreign art may be properly introduced into a national style of architecture; and shall proceed to an inquiry into the sacred architecture of the ancient people of Asia,—a portion of the world which that distinguished ornament of our country, Sir William Jones, says, “has ever been esteemed the nurse of sciences, the inventress of delightful and useful arts, the scene of glorious actions, fertile in the productions of human genius, abounding in natural wonders, and infinitely diversified in the forms of religion and government; in the laws, manners, customs, and languages, as well as in the features and complexions of men.”*

The Indian styles of architecture appear to have been drawn from their original dwellings, caves, and other excavations. Man, by nature, is undoubtedly, in countries where the soil admits, a burrowing animal, and mostly car-

* Sir William Jones's Introductory Discourse.

ries his original propensities even into states of refinement.

The period of authentic history in India, as in other countries, is comparatively of recent date. It is scarcely more than three thousand years since the most ancient and only genuine historical records* of the ancient world, ascribed to Musah, or Moses, (as we call him after the Greeks and Romans,) were composed. Herodotus, the most ancient Heathen historian whose works have reached our times, flourished a thousand years later; and Homer, the third ancient author who speaks of our art, is of too doubtful a period to establish dates.

The remains of architecture in India, from style and construction, seem to prove an early connexion between that country and Egypt. The pyramids, the colossal statues, the obelisks, the sphinx, the mummy pits and subterranean temples with colossal figures, and the lion-headed sphinxes, recently discovered by Belzoni, in Egypt, indicate the style and system of mythology to be akin to those of the indefatigable workmen who formed the vast excavations of Canarah, Elephanta, and Ellora; the vari-

* Dr. Robertson's Historical Disquisition concerning ancient India.

ous immense pagodas, pillars, and colossal images of Buddha, and other Indian idols.

Sir William Jones, than whom a greater man hardly ever graced our annals, who deserves to be ranked with Shakspeare, Milton, and Newton, and to whom may be applied the remark of Dr. Johnson upon Newton, "that if he had flourished in ancient Greece he would have been worshipped as a divinity," has incontestibly proved, in his incomparable Discourses delivered to the Asiatic Society,* that the whole population of this globe descended from three primitive stocks, which he calls Indian, Arabian, and Tartarian. The resemblance, therefore, in language, architecture, sculpture, and customs, between even distant nations, is not to be wondered at. After various observations on the language, manners, and antiquities of the ancient inhabitants of India, in these Discourses, which are the concrete of many volumes, this profound philosopher comes to the result that they had an immemorial affinity with the ancient Persians,† Ethiopians, and Egyptians; the Phœnicians, Greeks, and Tuscans; the Scythians, or Goths, and Celts; the Chinese, Japanese, and Peru-

* Sir W. Jones, Discourse viii.

† Discourse iii.

vians ; and I will endeavour to show, in the course of these Lectures, as I successively touch upon these various countries, that their ancient buildings all corroborate and prove this important fact in the history of mankind.

The principal remains of the most ancient specimens of the Indian, or Hindû, style of architecture, which have been hitherto discovered, are of a singular and extraordinary kind, being mostly excavations in the solid rock. Immense subterraneous temples have been discovered in various parts of the Indies, which are wonderful monuments of the skill and industry of the people who achieved them. These subterraneous caverns are apparently as ancient as the oldest Egyptian temples : and M. D'Ancarville, in his *Recherches sur l'Origine, l'Esprit, et les Progrès des Arts de la Grèce*, thinks them even anterior to the time of about two thousand years before Christ.

Some antiquaries have supposed these wonderful sculptured caverns to be no older than the first ages of Christianity, after the Indians had received the knowledge of the liberal arts and sciences from the Greeks. The absurdity of this hypothesis is apparent at a single glance ; for, in the first place, the Greeks did not prac-

tise excavations ; not to say that the style, character, and execution are as different as light and darkness from the style, character, and execution of Greek architecture.

Dr. Robertson,* on the contrary, thinks them to be of very remote antiquity, as the natives cannot, either from history or tradition, give any information concerning the time in which they were executed, universally ascribing the formation of them to the power of superior beings. Thus Stonehenge has been attributed to the magical power of Merlin the enchanter: and the Devil is recorded as the architect of, and has given his name to, many a stupendous work of human skill.

Mr. Goldingham, one of the Honourable East India Company's astronomers at Fort St. George, and a gentleman who had applied himself with much assiduity to the study of the antiquities of Hindustan, visited the Elephanta cave in 1795, and published an interesting and faithful account of this wonderful effort of human skill in the fourth volume of the Asiatic Researches.† This gentleman argues ably in favour of its having been an Hindû temple ;

* Hist. Disq. Appendix, p. 222, edit. 8vo. Edin. 1819.

† Page 405

but General Carnac, of Calcutta, who introduced and prefaced Mr. Goldingham's paper, and understood the antiquities of India in no common way, does not assent to this opinion. These immense excavations, cut out of the solid rock, appeared to the General to be operations of too great labour to have been executed by the hands of so feeble and effeminate a race of beings as the aborigines of India have generally been held to be, and still continue; and the few figures that yet remain entire, represent persons totally distinct in exterior from the present Hindus, being of a gigantic size, having large prominent faces, and bearing some resemblance to the Abyssinians, who inhabit the country on the west side of the Red Sea, opposite to Arabia.

There is no tradition of these caves having been frequented by the Hindus as places of worship; and at this period, the General adds on his own authority, no *poojah* is ever performed at any of them, and they are scarcely ever visited by the natives. He says he recollected particularly that *Ragonath Row*, when at Bombay, did not hold them in any degree of veneration; and yet an intelligent observer,*

* *Archæologia*, vol. vii. p. 286, &c.

who visited the cave of Elephanta in 1782, states that he was accompanied by a sagacious Brahmin, a native of Benares, who, though he had never been in it before that time, recognised at once all the figures, was well acquainted with the parentage, education, and life of every deity, or human personage there represented, and explained with fluency the meaning of the various symbols by which the images were distinguished. This, I think, is a clear proof that the mythology of the present day is not different from that delineated on the walls of these excavations: the most remarkable of which is at Elephanta, a small island in the harbour of Bombay.* An elephant of black stone, large as the life, is seen near the landing place, and most probably gave name to the island. The cavern is about three quarters of a mile from the beach; the path leading to it lies through a valley; the hills on either side are beautifully clothed, and, except when interrupted by the voices of the birds, a solemn stillness prevails; the mind is fitted for contemplating the approaching scene.

The cave is formed in a hill of stone, is about one hundred and thirty-five feet square, and near-

* Asiat. Res. vol. iv. p. 407.

ly fifteen feet high ; its massy roof is supported by rows of columns, regularly disposed. Gigantic figures, in relief, are observed on the walls ; these, as well as the columns, are shaped in the solid rock, by artists of some ability, and of unquestionable and astonishing perseverance.

There is reason for supposing that the Brahmins were originally a colony from Egypt, who fixed the first establishments in the vicinity of Bombay ; and by degrees engrafted their superstition on the ignorance of the Hindus, adapting the deities and mystical philosophy of Africa to the Asiatic fables and heroes, and carefully introducing the Egyptian cast and ceremonies.

Dr. Francis Buchanan, whose profound Essay on the Religion and Literature of the *Burmas*, a people in the island of Ceylon, forms one of the best essays in the sixth volume of Asiatic Researches,* thought the images in the cave at Elephanta, after he had become acquainted with the subject, to be evidently those of the gods of the *Brahmins*. “I well remember,” says the Doctor, “when I viewed them, (although then quite unacquainted with

* Page 251.

the controversies concerning their origin) that I was struck with the African appearance of their hair and features; and conceived them to be the work of Sesostris, as I had imbibed the vulgar idea that they were not the idols of the *Brahmins*." In various apartments of the cave, and on its walls, are sculptures, for a description of which I must refer the curious inquirer to the Asiatic Researches, the Archaïologia, and other able works on this interesting subject.

The form of its columns, although doubtless inferior to Grecian beauty, is, however, far more agreeable to the eye of taste than those of the Egyptians. The capitals resemble round cushions, pressed down by the incumbent weight.

The excavations in the island of Salsette, which is about ten miles north of Bombay, are among the architectural wonders of India. The artist employed by Governor Boon* to make drawings of them, asserted, that it would require the labour of forty thousand men for forty years to finish them. They are found near to Ambola, a village about seven English miles distant from Tanna.

The temple, or pagoda, is entered by a

* Archaïologia, vol. vii. p. 336.

doorway, which is twenty feet in height, and leads to the grand vestibule, at the end of which is the real door of the temple, on the two sides of which are sculptured various figures in relief. The temple itself is a square cell, of about twenty-eight feet; the upper part of which is supported by twenty columns nearly twenty feet high, of a form resembling in style those of Elephanta. This excavation much resembles that at Elephanta, both in style, design, and execution; but being wrought in a softer rock, the figures and *bassi rilievi* are not so perfect as at Canara, which is situate about ten English leagues from Tanna, on the north of the foregoing excavation at Ambola. There is another rock entirely excavated into similar caverns, but of different shapes and dimensions; and none equal in beauty to those before mentioned. Some of these caverns are very lofty, and appear to have been divided into two stories, as if for habitation; their want of sculpture also strengthens this surmise. They have apertures cut for light above, and square holes cut in each side of the rock, at an equal height on both sides, and opposite to each other, as if for the purpose of receiving joists or beams of timber. The columns found in these

caverns are ill formed, and of indifferent workmanship; and, being plainer and more simple in their execution than those of Elephanta and Ambola, are supposed to have been of older date. Views of these may be seen in the *Voyages of Mebula*, in the *Archaiology*, in the *Recueil des Monumens de l'Inde*, and in the beautiful works of Mr. Thomas Daniells.

The elements of the Indian style of architecture, like those of the Egyptian described in my last Lecture, are derived from these excavations, which were their earliest dwellings, and their earliest temples. They are more to be admired for their vastness, and singular style of decoration, than for grace in form or good taste in design.

Among the other excavations worthy of attention both for number and extent are those found in the mountain at about a mile to the eastward of the town of Ellora, Elloor, or, as it is called on the spot, Verrool. These are named the pagodas of Paraswa Rama Saba and Indur Subba, or Sabha. They are situate also near Dowlatabad,* a fortified town in the Deccan of Hindûstan, fifteen miles from Aurungabad, the capital of

* The same with the ancient Tagara.

the province of Dowlatabad, or Amednagure ; and are most of them cut out of the natural rock. For the space of nearly two leagues together there is little else to be seen than pagodas, in which there are thousands of figures, appearing, from the style of their sculpture, to have been of ancient Hindû origin. M. Thève-not, who first gave any description* of these singular works, asserts the above fact.

The height of the excavation of Indur Subbat is forty feet, its depth fifty-four, and its breadth forty-four. The height of the obelisk by the side of the pagodas is twenty-nine feet, including its pedestal and the group of human sitting figures which is on the top. The obelisk is fluted and ornamented with some taste, and has a light appearance. On the other side is the representation of an elephant, whose back just rises above the front wall, but without rider or hoda. The plans of these excavations are as regular as if built ; and the piers, pilasters, or square pillars, are equidistant, and sculptured in a bold and original style.

What I have ventured to advance concerning the elegance and taste of some of the orna-

* Voyages, part iii. chap. 44.

† Asiat. Res. vol. vi. p. 393.

ments in Indian architecture is confirmed by Colonel Call, formerly chief engineer at Madras,* who urges this circumstance as a proof of the early and high civilization of the Hindûs. "It may be safely pronounced," says he, "that no part of the world has more marks of antiquity, for arts, sciences, and civilization, than the Peninsula of India, from the Ganges to Cape Comorin. I think the carvings on some of the pagodas and choultries, as well as the grandeur of the work, exceed any thing now-a-days, not only for the delicacy of the chisel, but the expense of construction, considering, in many instances, to what distances the component parts were carried, and to what heights raised."

The column from the interior of a temple near Muddumpure, as shown in Daniell's Views, although very ancient, has the elements of a beautiful and more modern style. The gradation from the octangular base to the multangular shaft, setting off to the circular upper shaft, is at once elegant, and possessed with the greatest constructive strength. The masculine style of the necking, under the quadri-frontal capital, is bold and characteristic.

* Philosophical Transactions, vol. lxii. p. 354.

The most learned and profound of the eastern antiquaries, members of the celebrated Asiatic Society,* differ as to the periods of these excavations ; and the discussion of the question would be too long for this place, although of a most interesting nature for the study. They are undoubtedly of most remote antiquity, and appear to be derived from the same elements, if not from the same people, as those† in Egypt.

Another fine example of a column is from an ancient Indian temple (engraved in Hodges's Views) near Benares, a splendid, rich, and populous city, on the north side of the Ganges, which is here very broad, and the banks very high. The appearance of this ancient city from the water is extremely beautiful. Several Hindû temples embellish the banks of the river, and

* See Dr. Buchanan's Essay on the Religion and Literature of the Burmas, in vol. vi. of Asiatic Researches, and Sir William Jones's Discourses throughout.

† Different learned men have supposed, that BOODHA of the Hindus to have been the same with NOAH, MOSES, or SIPHOAS, the thirty-fifth king of Egypt. Sir William Jones supposed BOODHA to have been the same with SESAC, or SESOSTRIS, king of Egypt, " who by conquest spread a new system of religion and philosophy from the Nile to the Ganges, about a thousand years before Christ."—Sir Wm. Jones, Discourse vii.

many other buildings, public and private, ancient and modern, are magnificent.

This singular and most beautiful column, which to the variety of the Indian, adds many of the ornamental graces of the Grecian style, is thought to be of the age of Alexander by Mr. Hodges. This eminent artist, and indefatigable traveller, conceived, from the striking resemblance which many of its parts bear to the Greek style, that it must have been executed by Greek architects shortly after Alexander's expedition into India, which, according to Dr. Robertson,* was about a hundred and sixty years after the reign of Darius Hystaspes. The biographer of Apollonius Tyaneus† relates, that when he visited India three hundred and seventy-three years after Alexander's expedition, twelve stupendous altars, which he erected as monuments of his exploits, were still remaining, with legible inscriptions. Be this as it may, the elements and style of the column bear out Mr. Hodges's hypothesis. Its elements, perhaps from compliment to the country, are Indian, its ornaments pure Greek. Its base, its shaft, its capital, are all, in shape, situation, and distribution, completely Hindû,

* Historical Disquisition, sec. i. p. 13.

† Philos. Vita Apol. lib. ii. c. 3, edit. Olear. Lips. 1709.

with its multangular and mixed circular shaft, its quadrifrontal capital, and truss-shaped abacus. Its decorative sculptures are essentially and finely Greek. In its pedestal is found the Grecian honey-suckle in its greatest purity; the angles of the shaft are embellished by the sacred water-leaves of the Hindûs; above these are Doric flutes; and in the capital are found the leaves of the Greek acanthus.

For beauty of outline, for a graceful setting-off from a square to an octagon, and thence to a circle, for richness and purity of style, this column of Benares stands unrivalled in Eastern art.

Splendid and celebrated as is the city where this column is to be seen, it is yet more distinguished as the ancient seat of Braminical learning; and the same manners and customs still prevail among the people as at the most remote period that can be traced in history, as they most pertinaciously guard against innovations from foreigners.

The next Indian specimens are a series of examples from the early periods of the Mogul empire, which exhibit their modes of construction, both square and circular, proving their early knowledge of the arch, the cupola, and other difficult and scientific modes of con-

struction; all of which are to be found in the works of Daniel and Hodges.

One of these is a singular building in the fort of Gualior, which stands on a vast rock, about four miles in length at the base, but narrow and nearly flat at the top, the sides of which are so steep as to appear nearly perpendicular; for, where it was not naturally so, it has been cut away. The height from the plain below is from two to three hundred feet, and the only entrance is by steps running up the side of the rock.

Mr. Hunter,* who visited this singular fortress, in February, 1792, says, the acclivity on which the fortress stands is one mile and six-tenths in length, and its greatest breadth not above three hundred yards. Its greatest height is at the north, where it is three hundred and forty-two feet. At this end is a palace, and about the middle of the fort are two remarkable pyramidal buildings, of red stone. They are in the most ancient style of Hindû architecture, and are said to have been built for the residence of the mother-in-law and sister-in-law of a rajah, who reigned in a very remote period, when this fortress stood in the

* Asiat. Res. vol. vi. p. 17.

capital of an extensive empire. It was considered perfectly secure from assault till Major Popham took it by escalade, on the 3d August, 1780.

To enter into the details of the specimens to which I last alluded would occupy an entire lecture, but what I have already stated serves to point out the essential elements of the Hindû style. I have before said that the elements both of the Egyptian and the Indian styles are derived from excavations. In proof of which I take leave to call your attention to the excavated pagoda at Elloor, and the constructed temples of Hermopolis and Tentyra. In these works we find close intercolumniations, short and low architraves, and columns of low stature rudely sculptured. Nor is there any apparent difference to show whether the excavation be a construction, or the construction an excavation.

As another proof of a similarity of style which I have remarked upon before, between the ancient Egyptians and Hindûs, is their mutually using lofty spires, like the tower of Allahabad,* and the singular conical brick building in the Hadjipoor district, near the Gunduc

* Allahabad is considered by Dr. Robertson, who differs from Major Rennell, as the Palibothra of antiquity.

river. This immense pile of brick* is about two days' journey up the Gunduc, one of the tributary streams on the north of the Ganges, near a place called Kessereah; it is called the Dewry of Bheem Sain. But Mr. Burrow, who visited it about 1785, and took its dimensions, conceives it to be evidently intended for the well-known image of the god Mahadeo; having originally been a cylinder placed upon the frustrum of a cone, for the purpose of being seen at a distance. It is at present† very much decayed, and it is not easy to tell whether the upper part of the cylinder has been globular or conical. A considerable quantity of the outside is fallen down, but it still may be seen a great distance up and down the river.

The dimensions of this colossal edifice, as given by Mr. Burrow in the *Asiatic Researches*, are—the diameter of the cone at the base three hundred and sixty-three feet; height of the conic frustrum on which the cylinder is placed, ninety-three feet; diameter of the cylinder, sixty-four feet, which is nearly two-thirds the size of the diameter of the base of the cupola of St. Paul's; height of the present remains of the cylinder, or round tower, sixty-five feet; entire

* *Asiat. Res.* vol. ii. p. 477. † *Ibid.*

height, one hundred and fifty-eight feet, or nearly the height of the Monument without its pedestal. Both the cylinder and the cone which forms its base are constructed of well burnt bricks; those of the cylinder are of various sizes, many of them two spans long and one broad; others of the common size but thinner. There is no appearance of the cylinder being hollow, but some future Belzoni may discover an interior like those of the pyramids which he has successfully investigated.

The pillar of Allahabad, as described by the late Captain Hoare, is a lofty conical structure, covered with inscriptions, which are given in the second volume of the Transactions of the Asiatic Society, with an engraving of its elevation; but neither Captain Hoare, Mr. Colebrooke, nor *Moonshee* Mohammad Morad, who accompanied the Captain to Allahabad, could obtain any information respecting it.

Allahabad is such a seat of Hindû devotion, that it is called *the king of worshipped places*.* The territory round it, to the extent of forty miles, is deemed holy ground. The Hindûs believe that, when a man dies in this place, whatever he wishes for he will obtain in his

* Ayeen Akberry, vol. ii. p. 35.

next regeneration. Although they teach that suicide in general will be punished with torments hereafter, yet they consider it as meritorious for a man to kill himself at Allahabad.*

Another splendid remain of Hindûstaneë magnificence is the ruins of the beautiful stone building at Delhi, called the Shikargah or hunting place of Feeroz Shah, supposed to be a cemetery or mausoleum, with its remarkable pillar of a single stone upon the top, called the Lat, or staff, of the same monarch. The date of this building is involved in great obscurity. From a translation made by Col. Follien from its inscriptions, it would appear to be as old as the year A.D. 67; but from a more correct version made by Mr. Henry Colebrooke, who is celebrated as a Sanscrit scholar by his version of the Hindû Law Digest, compiled under the superintendence of Sir Wm. Jones, it is made A.D. 1164. One inscription, however, may relate to the pillar, and the other to the main building.

The Feeroz Shah, whose name is now attached to the pillar, which is acknowledged to be a very ancient Hindû monument, appears from Ferishtuh's history to have reigned at Delhi

* Ayen Akberry, vol. iii. p. 256.

between the years 1351 and 1388, in the last of which he died, at the age of ninety; and Ferishtuh, according to his translator, Col. Dow, gives him the following character, which must make the heart of every architect leap for joy at the very idea of such a patron having occurred, and by a bare possibility occurring again.*

“ Though no great warrior in the field, he was by his excellent qualities well calculated for a reign of peace. He reigned thirty-eight years and nine months, and left many memorials of his magnificence in the land. He built fifty great sluices, forty mosques, thirty schools, twenty caravanseras, an hundred palaces, five hospitals, an hundred tombs, ten baths, ten spires, one hundred and fifty wells, one hundred bridges, and the pleasure-gardens he made were without number.”

Mohammud Ameen Rasee, a native historian, who wrote a history of the world in the reign of Akbar, affirms that this building was a hunting place of Feeroz Shah. It is a house of three stories, in the centre of which is a pillar of red stone of a single piece, round which are engraved several inscriptions of a character which has hitherto remained unde-

* Dow's History of Hindoostan, vol. i. p. 336.

ciphered. This historian says only one-third is visible and the remaining two-thirds are buried by the ruins: which account, however, I have not as yet found authenticated. Its length or rather height above the roof is thirty-seven feet, and its circumference, as measured by Captain Hoare's *Moonshee Mohammud Morad*, ten feet four inches. Some authors* say that the pillar is a monument of renown to the rajahs or princes of Hindûstan, and that Feeroz Shah erected the building on which it stands for a menagerie and aviary, as an atonement for the severities he practised on the inhabitants of Cumassu. It is, however, a beautiful remain of Hindû art, and is agreeably varied in its several stories for effect of light and shade. When perfect, with its verandas and porticoes, it must have presented a graceful appearance.

In noticing the architecture of Hindûstan the picturesque ruins of the ancient metropolis of Dacca should not be omitted; for the splendour and taste of its architecture and its striking variation from all the other examples in this part of the world entitle it to particular notice. Dacca is a city of Bengal, lying on

* Asiat. Res. vol. vii. p. 177, &c.

the banks of the Ganges, is the third city in the province for extent and population, and has large manufactories of the finest muslins and silks. This interesting part of India was not visited by the Messrs. Daniel, nor, till recently, by any European artist. The striking peculiarities of these buildings, to which my attention was first called by the exquisite engravings of the antiquities of Dacca by Mr. Landseer,* are their lightness and elegance, their square rectangular panellings, which are peculiar to these structures, their arched perforations somewhat resembling the Gothic, their lofty, light, octangular minarets, the beautiful play of light and shade over their elevations, and the elegantly-proportioned cupolas which crown and finish the whole; making them valuable studies for the young architect, and interesting to the amateur and antiquary.

Ere I conclude this portion of my duties, and in order to assist you in forming some idea of these buildings, I shall briefly describe the celebrated pagoda of Seringham, (in the words of the elegant and accurate historian† of India,) which, according to the best authorities, surpasses the venerated pagoda of Chillambrum

* Landseer's Dacca.

† Orme's Hist. of Milit. Trans. of Hindustan, vol. i. p. 178.

as much in grandeur as it is superior in sanctity. It is situated about a mile from the western extremity of the island of Seringham, formed by the division of the great river Caveri into two channels; and "is composed of seven square enclosures, one within the other, the walls of which are twenty-five feet high and four thick. These enclosures are three hundred and fifty feet distant from one another, and each has four large gates, with a high tower, which are placed, one in the middle of each side of the enclosure, and opposite to the four cardinal points. The outward wall is near four miles in circumference, and its gateway to the south is ornamented with pillars, several of which are single stones thirty-three feet long, and nearly five in diameter; and those which form the roof are still larger: in the inmost enclosures are the chapels. The extreme veneration in which Seringham is held, arises from a belief that it contains that identical image of the god Wistchnu, which used to be worshipped by the god Brahma. Pilgrims from all parts of the peninsula come here to obtain absolution, and none come without an offering of money; and a large part of the revenue of the island is allotted for the maintenance of the Brahmins who inhabit the

pagoda ; and these with their families formerly composed a multitude of not less than forty thousand souls, maintained, without labour, by the liberality of superstition. Here, as in all the other great pagodas of India, the Brahmins live in a subordination which knows no resistance, and slumber in a voluptuousness which knows no wants."

The length to which I have already gone upon the ancient architecture of Hindûstan, and a reference to the contents of the present Lecture, give me warning that I must conclude this portion ; for which I have so many materials, that with a trouble little more than holding my pen, I could continue for two or three more lectures.

In that same period of the world which was treated of in the early part of this investigation, Noah is supposed to have founded the vast empire of China. To continue the parallel, the Assyrians also, under Semiramis, as mentioned in my last Lecture, founded many illustrious cities, and cultivated architecture in a magnificent manner.

The brief mode in which the historical or introductory part of each style is obliged to be conducted, so as to leave sufficient time to

dilate upon the necessary individual specimens, allows me but to add, that the most splendid architectural works of this age, according to the most authentic historians, were to be found in Mesopotamia; of which we have but few traces, it having been, unfortunately, fate of the early achievements of that country to be nearly obliterated. Babylon and the temple of Belus, the stupendous walls, and hanging gardens of that magnificent empire, are but little more than as tales of old romance. Yet we may ere long expect some interesting and authentic documents of ancient Babylon, from the valuable labours of Captain Lockett, whose drawings I believe are now in the hands of the engraver. Many ancient historians* speak of temples, palaces, and other structures, raised by the first sovereigns of Egypt, Nineveh, and Babylon.

At this same period too, 1582 years before Christ, to keep up the chain of historical connexion, Cecrops left Egypt to colonize ancient Greece, where, some authors say, he built twelve cities.† He taught the Greeks to build

* Herodot. lib. ii. n. 99. Diod. lib. i. p. 16, 18, 55; lib. ii. p. 115, 120. Jul. African. apud Syncell, p. 54, 55.

† Philicor. apud Strab. lib. ix. p. 609.

houses, and founded a city which he called after himself Cecropia;* and, to put his new colony in a perfect state of security, he built a fortress on rising ground, where they afterwards built the temple of Minerva.† Scamander founded Troy.

Athens, Sparta, Cranaus, and Grecian Thebes owe their origin to this period. Egypt was overrun by the Ethiopians, but its indestructible edifices bade defiance to the flames. Tyre was also built about the year 1060 before Christ, of which I shall speak more hereafter. Dido, about the year 900 before Christ, founded Carthage; and in these days the Babylonian and Persian empires flourished. It is to the architecture of this latter people that I now wish briefly to call your attention.

The architectural ruins of the old inhabitants of that great empire, improperly called by Europeans Persia,‡ (the name of a single province being applied to the whole empire of *Iran*, as it is correctly denominated by the present natives of it, and by the learned musulmen who reside in British India,) are conclusive evidences of the grandeur of this

* Apollod. lib. iii. p. 192. Plin. lib. vii. sect. 57, p. 413.

† Thucyd. lib. iii. p. 110. Valer. Max. lib. v. c. 3.

‡ Asiat. Res. vol. ii. p. 43.

ancient people. They differ in style both from the Egyptian and Hindû, yet possess a general affinity. Sir Wm. Jones, after due investigation, (and who was a more ardent or laborious investigator than he?) concludes from the most unexceptionable evidence that the Iranian or Persian monarchy must have been the oldest in the world; but was doubtful to which of the three stocks, Hindû, Arabian, or Tartarian, the first kings of Iran belonged. He also, after a most learned and interesting disquisition, holds this proposition firmly established, that Iran, or Persia, in its largest sense, was the true centre of population, of knowledge, of languages, and of arts. Of such a people, an account of their architecture cannot but be of consequence, and it is therefore to be lamented that so few faithful delineations of their buildings have as yet been made.

The ruins of Persepolis are the principal remains of Persian architecture. This city was taken by Alexander, who was persuaded by Thais, during a drunken revel, to set it on fire. At the place now called by the natives Kilmanar or Tschilminar, the Forty Columns, from the circumstance of there being that number standing when the Mahometans invaded this part of Iran, at present, I believe, there are not

above nineteen left. The splendid edifice, of which these are the remains, is supposed to have been erected by their ancient king Jemshed, or Shemsheddin. The style of the architecture and sculpture proves their antiquity; every column being surmounted by a figure of some animal, and the well known circumstance of the ancient Persians performing* their religious duties in the open air proves, in opposition to the opinion of Millin, (for the building could never have had architraves or a roof,) that it was an ancient Persian temple. These singular columns are formed of a beautiful white marble, which is found in the mountain Rachmed near the spot.

Count Caylus thought he perceived, and endeavoured to draw, an analogy between the Persepolitan and the Egyptian styles, but we have not sufficient authority of the former to examine these claims.

My next inquiry into these remote ages of the world, and of which we have nearly as little existing ruins accurately delineated, on which to found a system, is the architecture of the Phœnicians. This primitive people, who were civilized from the earliest times, occupied the

* Millin.

coast of Asia eastward of Egypt, and extending from Arabia Deserta to the Mediterranean Sea. It is but a small territory, but its people have been greatly celebrated as the inventors of navigation, and, according to some, of arithmetic and writing.* Its inhabitants were the first, of whom we have any account, who traded with Britain for tin.

The Phœnicians are generally supposed to be those descendants of Noah who settled on the coast of Palestine, and are the same people who are called in the Old Testament the Canaanites,† a word signifying merchants,‡ and afterwards by the Greeks§ Phœnicians. Sidon, their capital, so often spoken of by Homer and which was afterwards eclipsed by its own colony Tyre, was founded by Sidon, the eldest son of Canaan. Inhabiting a barren soil they applied themselves to commerce and the arts, and appear to have been distinguished for their excellence in manufactures

* Polydor Virgil, lib. iii. c. 2, art. 1, p. 212.

† "The Canaanites dwell by the sea, and by the coast of Jordan." Numb. xiii. 29.

‡ Braun. de Vestitu Sacerdot. Hebr. p. 251. L'Hist. Univers. tom. i. p. 219.

§ Ibid. p. 576, tom. ii. p. 53 and 61. Marsh, p. 290. Calmet, vol. i. p. 272, &c.

and works of taste.* Their first settlements were in the isles of Cyprus and Rhodes,† and they passed successively into Greece, Sicily, and Sardinia; afterwards into Gaul, and, always advancing, discovered the southern and western coasts of Spain, and onwards into Britain. It is even thought that the isles of Cassiterides, whence they obtained their tin,‡ were the Solingues and part of Cornwall. Of their beautiful city Tyre, the twenty-seventh and twenty-eighth chapters of Ezekiel give a grand and poetical description; describing it as “of perfect beauty”§ “in the midst of the sea.”|| Its buildings and fortifications were of great extent; “The men of Arvad, with their army, were upon thy walls, and the Gaddims were in thy towers: they hanged their shields upon thy walls round about.”¶ The whole of the two chapters are worthy of reference for their striking description.

The Phœnicians had several cities distinguished for their magnificence, wealth, manu-

* Bochart in Phaleg. lib. iv. c. 35, p. 343.

† Goguet l'Origine des Loix, tom. ii. p. 295.

‡ Bochart Can. lib. i. c. 39, p. 722 and 724.

§ Ezek. xxvii. 3. || Ibid. ver. 4. ¶ Ibid. ver. 11.

factures, and extended commerce. Among the principal were Joppa, Damascus, and Baalbec. Herodotus mentions a splendid temple of Hercules at Tyre; and Hiram, King of Tyre and Sidon, is mentioned as the founder of many considerable places. It is probable that the Phœnician architecture was of a style differing from that of neighbouring nations, as Strabo, in speaking of Tyrus and Aradus, two islands in the Persian Gulf, says, they had temples resembling *those of the Phœnicians*.

It has been conjectured, and with much probability, that the Phœnician architects constructed their edifices of timber, as Mount Lebanon supplied them with a considerable quantity; and with what we are acquainted of the construction of the temple of Solomon, which was built by Phœnician artists and workmen, much timber was used in its construction.

This brings us to a much darker subject, the history and characteristics of architecture among the early Jews.

The Hebrews, Israelites, or Jews, by a residence in Egypt of nearly four hundred years, had attained a considerable degree of civilization. After their deliverance from slavery, in

that country, they led a wandering life for forty years. The temples which they had seen in Egypt, dedicated to the Egyptian idols, led them to consecrate a temple, where they might assemble in public worship of the true God. As it was necessary, from their mode of life during their sojournment in the wilderness, that it should be portable, they constructed it in the form of a spacious tent.* In the plan and general appearance of this temporary building, known by the name of the Tabernacle, they took, it has been conjectured, the form of the Egyptian temples for their guide; but in the details and ornaments, they adopted a peculiar and national style. The whole structure, according to the best authorities, covered a space of one hundred biblical cubits by fifty cubits wide, and the enclosure five cubits high, formed of wooden columns with brass bases and silver capitals, having curtains of tapestry suspended between them. These columns were sixty in number, twenty on each side, which lay north and south, and ten on each end, which faced the east and west. The Jews used this moveable temple for a length

* Calmet, tom. ii. p. 391.

of time after the conquest of Palestine; but under the reign of Solomon they constructed a permanent temple at Jerusalem.

David, the father of Solomon, had made considerable preparation for its construction, which was greatly facilitated by the alliance of the Jews with the Tyrians, who furnished them with architects, workmen, and the necessary timber. The accounts of this building, transmitted to us by the Bible, are not sufficiently clear to enable us to form a precise idea of it; nor have other authors much cleared the way.

The clearing of the site of this temple, a work of immense labour, was begun under the reign of David, and the whole structure finished and dedicated by Solomon.

The summit of Mount Moriah formed a plain of thirty-six thousand three hundred and ten square feet. They began by levelling the top and sides of the mountain, against which they afterwards built a wall of free stone four hundred cubits high. The circumference of the mountain at the foot was three thousand cubits.* Upon the plain he built the temple,

* According to Pocock there are still some remains of this wall.

divided like the tabernacle, into two divisions, by a partition of cedar.

Under the second, or the sanctuary, it appears, they preserved the treasures of the temple.

In the principal front was the ulam, probably a grand portico, such as they had formerly seen in several Egyptian temples, the construction of which may serve to explain this of Solomon. The temples of the ancients were generally without windows; but that of Jerusalem appears to have had them, and of the same form as those observed in the ruins of the great temple of Thebes. The timbers of the ceiling were of cedar, and it appears that the roof was flat like the Egyptian temples.

Round the temple was a wall or enclosure, and the space between that and the temple was occupied by a porch divided into three stories. The principal edifice was preceded by two courts; the first and largest was for the assembly of the people: in the second, called the priests' court, was the temple. It was surrounded with apartments or houses which were for the lodgings of the priests, for the preservation of the instruments used in sacrifice, and to confine the beasts, &c.

Before the ulam were two columns of brass, of twelve cubits circumference, and eighteen high, without reckoning the capitals, which were executed in bronze, and five cubits high. These capitals resembled, according to the expression of the Bible, "lily work," which indicates some resemblance to the Egyptian capitals, composed from the lotus flower. There is no mention made of bases, and it is probable that they had none. These were, no doubt, intended as a decoration to the whole, like the obelisks which were placed before the Egyptian temples.

The exterior walls of the temple were of stone, squared at right angles, and ornamented with the figures of cherubim, palm-leaves, flowers, &c. sculptured probably in the stone like the Egyptian hieroglyphics. The roof was covered with plates of gold, and the interior decorated in the richest manner; the Hebrews following the custom at that time of all civilized people in ornamenting their temples, they used a great quantity of gold and precious stones. Besides this temple, Solomon erected many other works, as the walls of Jerusalem, several public granaries, stables, &c.

The accounts of this building given to us in the

books of the Old Testament are too well known to need repetition here; but, as I have said, they are not sufficiently clear and technical to enable us to form an architectural idea of its construction. Dr. Pocock and other modern travellers give sufficient accounts of its ruins to prove its existence and extent. Among other Jewish buildings, King David is related to have built a palace on Mount Sion, by Tyrian artists; and Solomon one of considerably more splendour which was thirteen years in building, another for one of his wives, a daughter of the king of Egypt, and a summer palace, called the House of Lebanon; he also fortified many of his towns and cities. All the timber used in these buildings was taken from Mount Lebanon, which abounded with cedars and firs. They were all executed by Tyrian workmen, for Solomon would not have one of his subjects employed upon the works.

I have but little doubt, although in opposition to a recent ingenious essay, attempting to prove Solomon's temple to have been of the pure Grecian Doric order, that all these ancient Jewish buildings resembled those of the Egyptians and Phœnicians. The disposition of the

whole, the pyramidal construction of the walls and the ulam before the temples, are among many proofs destructive of the singular hypothesis alluded to. Conjecture is apt to bewilder and often to betray; it is thus that Inigo Jones has absurdly twisted Stonehenge into a temple of the Tuscan order.

The next subject of contemporary architecture is that of the Chinese. Tents and pavilions appear to have been the original types, and to have served for architectural models to this extraordinary nation. From this origin arises its essential character—lightness, and its essential defects—weakness and bad taste. The materials principally used by the Chinese are wood of different kinds, bricks and tiles, burnt or dried in the sun; marble and stone are very rarely used, which may be attributed to the climate. The heat and humidity of the southern provinces render it very unhealthy to reside in houses built of stone, and, according to the missionaries of Peking, they would be uninhabitable for more than half the year in the northern provinces. The general style of Chinese architecture must be familiar to every one who has drank from a China tea-cup, or who has seen many of the signs of grocers' shops,

Sir William Chambers's Pagoda in Kew Gardens, or Mr. Nash's Pavilion at Brighton.

The Chinese are governed more by the police than by either theory or good taste in their architecture. Their laws prescribe with the greatest accuracy how the *lou* or palace should be built of a prince of the first, second, or third order of the imperial family, of a grandee of the empire, or of a mandarine; and they also regulate, like a building act of parliament, the public edifices of the capital, and of provincial cities and towns, according to their several ranks or grades in the empire. According to these laws, which are said to be very ancient, the number of courts, the dimensions of the terraces, the length of the buildings, and the height of the roofs are ordered by progressive degrees of increase, from the simple citizen to the man of letters, from the man of letters to the mandarine, from the mandarine to the prince, and from the prince to the emperor.

All these measurements are fixed to within a few inches. These laws have of course produced an uniformity in the houses of individuals; and, after the gradation prescribed among all buildings, it is not astonishing that the common

houses are but mere huts of a single floor ; the climate also may perhaps prevent their building them of many stories. Their plan is also as uniform as their elevation. More than half the ground plan is occupied by courts and passages. The facade next the street of the Chinese houses has no windows, except when employed as a shop. There is but one opening, viz. the door, before which they hang a mat or place a screen, to prevent passers-by from looking in. The form of the Chinese roofs is characteristic, always producing the idea of a tent or pavilion as the model of their architecture ; they are terminated by a platform with a species of parapet, and finish with a curve. Pillars are very common in Chinese architecture, and are used as supports to the roofs of their houses. They are generally formed of timber, with stone or marble bases, without capitals, and sometimes with wreathed shafts ; and, when used externally, support a kind of veranda, or outer roof, which being too low for a house, the builder is led to construct a second roof, within the peristyle, much higher.

In Chinese architecture are found doors of a circular form, approaching to the idea of an

arch, but resembling the door of a bird-cage more than the entrance of a house. The palaces of China, especially those of the emperor, are distinguished by their vast extent, by the number of large courts, turnings, galleries, porticoes, halls, &c. of which they are composed.

As to their temples or pagodas, the finest are in the palaces of the emperor. Some of those in the other parts of Pekin and its environs, are of an immense height, the finest and best preserved being generally such as contain lamas or bonzes. The fairs, which are held every month in the different parts of Pekin, are kept in the great miao, or temple, the large and numerous parts of which are surrounded with galleries, which make them very convenient for that purpose. Lofty towers are also common in China, which Europeans improperly call pagodas. In some provinces every town has them, even to the most inconsiderable hamlets. The most celebrated is that in the city of Nankin. It is usually called the Great Tower, or the Porcelain Tower, because it is encrusted with this material. Models of it in relief in porcelain and in bronze may be seen in several cabinets. The Chinese give these towers diffe-

rent names, according as they are used for astronomical or atmospherical observations, to enjoy an open view of the country, or as sepulchral towers, or whether they are simply buildings of several stories. They are isolated, round, square, hexagonal, or octagonal, and built with various materials. The number of arches raised in honour of celebrated characters, which are often improperly called triumphal arches, is very great in China. They have often three openings, one large one in the middle and two small ones on the side; these arches are generally ornamented with figures of men, birds, flowers, and are tied together by cords. The annals of China mention three thousand six hundred and thirty-six celebrated persons to whose memory arches of honour have been erected. Captains, generals, princes, philosophers, mandarins, who have rendered services to the public; and there have been also many women who have obtained such memorials.

Many of their other national works are of a more substantial and durable nature; but I can see nothing in their style, even after reading attentively the best *European-Chinese* architect, if I may so express myself, Sir Wm. Chambers, and inspecting the best designs both executed and un-

executed, to commend on the score of propriety, beauty, or good taste. Among the first of them, which, however, are but semi-Chinese, are the mausoleum of Teshoo Lama in Thibet, and the temple of Shoomadoo at Pegu. The first requires no particular description; its characteristics are the same as I have just described, but its proportions and execution somewhat better.

The other, which is a large and splendid conical structure, is the great temple or pagoda called Shoomadoo Praw, situated in the metropolis of Pegue, a kingdom between India and China, but partaking more of the elementary style of the Chinese, the tent, than that of the Hindûs. I have classed it on the present occasion with the former. Its pyramidal shape is graceful; its apex approaches even to the elegant, and, except a tendency too much to the florid, its accessories are rich and beautiful.

This singular building is called the Temple of Shoomadoo* or the Golden Supreme, compounded of the Birman word *shoo*, golden, and *madoo*, a corruption of the Hindû Maha Deo. Its addition Praw, signifies in the Birman lan-

* Asiat. Res. vol. v. p. 115.

guage Lord, and is always annexed to the name of a sacred building. As farther proof of my hypothesis of the Indian derivation from Egypt, I would add that *phra* is the proper name under which the Egyptians first adored the sun, before it received the allegorical appellation of Osiris, or author of time.

This extraordinary edifice, according to Col. Symes, who delineated and described it a few years since, is built on a double terrace, one raised upon another. The lower and greater terrace is quadrangular and raised about ten feet above the natural level of the ground. The upper terrace is smaller, of a like shape, raised about twenty feet above the lower. The length of one side of the lower terrace is about one thousand three hundred and ninety-one feet; and of the upper, six hundred and eighty-four.* These terraces are ascended by flights of stone steps; on each side are dwellings of the Rahaans, or priests.

The temple itself is an octangular pyramid, built with brick and fine shell mortar, without any excavation or cavity of any sort. Each side of the octagon, at the base, measures one

* Asiat. Res. vol. v. p. 116.

hundred and sixty-two feet. This immense breadth diminishes abruptly to a spiral top, and may not inaptly be compared in shape to a large speaking trumpet.*

The *tee*, or umbrella, which serves as a finial, is to be seen on every sacred building in the Birmán empire, which is in repair. The raising and consecration of this last and indispensable appendage, is an act of high religious solemnity, and a season of festivity and relaxation. The monarch who was on the throne when Col. Symes visited Pegue bestowed the present *tee*. It was made at the capital, and many of the principal nobility came down from Ummerapoora to be present at the ceremony of putting it on; its circumference is fifty-six feet. It rests on an iron axis, fixed in the building, and is farther secured by large chains strongly rivetted to the spire. The under part of the umbrella, or upper part of the spire, is girt with circular mouldings, above which there are ornaments in stucco, not unlike the leaves of a Corinthian capital.

Round the lower rim of the umbrella are appended a number of bells, of different sizes,

which, agitated by the wind, make a continual jingling. The *tee* is gilt, and it was the intention of the king to gild the whole of the spire. The extreme height of the building is three hundred and sixty-one feet, which is very little short of the entire height of St. Paul's.

Among the greatest works of the Chinese is their celebrated wall, alluded to in the last Lecture, before which all the walls of the Romans, the Picts, and others, must bow in acknowledgement of superiority. This marvellous work was upwards of two thousand miles in length, and contained more than forty-five thousand towers. Their canals also are prodigies of science and mechanics, and they have eminently excelled in bridge building. But no mind, alive to genuine beauty and good taste, can admire the style of Chinese architecture.

Before closing this Lecture, I cannot refrain from again calling public attention to the importance of cultivating a pure taste in architecture, and of encouraging none but legitimate professors, who scorn to soil their hands with the anomalous and disgraceful practice of being builders and architects of the same concern.

The present time, as I ventured to hint in my last Lecture, is most auspicious to the arts, and our good or ill name to posterity now almost hangs upon a thread.

I hope to be allowed a few more words before closing, on some immediate causes of the present depressed state of architecture. Among the foremost of the list, is the want of a critical acquaintance with its excellencies and defects, in those whose situations enable them to be employers and patrons. This results partly from the difficulties professors themselves raise about the art, which should be publicly taught, as in Dean Aldrich's days, to the young nobility and gentry in both our Universities.

But I place, without fear of contradiction, as a more immediate and fatal cause, the indiscriminate patronage and employment by the public of persons totally ignorant of every branch of education requisite to a knowledge of design. It would be easy to show that this preparative education is necessary, but I apprehend it will readily be granted that much more than the acquirements and capacity of a mechanic, however intelligent, is requisite to the formation of an able architect. It is a well known fact, that William of Wickham, Inigo Jones, Sir Christopher Wren, Sir

John Vanbrugh, Lord Burlington, and James Wyatt, were men of excellent education, and well versed in all the elements of fine art, literature, and science. Can magnificence, elegance, or good taste, be expected from men of inferior qualities? Do we gather grapes of thorns, or figs of thistles?

If mere building only be required, the carpenter, the bricklayer, the mason, the plasterer, the paper-hanger or upholsterer, may perhaps sometimes accomplish his employer's object. But when a man of rank, who enjoys his dignity for higher and nobler purposes, is content with a design from a carpenter, he does a mischief to the country whence he derives his rank, and himself no service, even on the score of economy; for an honest workman, he may be assured, will not be the *less* honest when he has a controuling check on his natural and fair desire of gain.

The more tasteful and elegant the design, the more economical may it be also: for

“Certain in its aim,

“Taste never *idly* working saves expense.”

THOMSON.

LECTURE III.

The Subject continued from the Time of the Assyrians and their Contemporaries: the Founding of Athens, Thebes, and other Cities of Ancient Greece, down to the Age of Pericles, being the FIRST EPOCH of Grecian Architecture. The Elements, Style, and Modes of Construction of some of the most Ancient Specimens. From the Beginning of the Age of Pericles to the Decline of the Arts in Greece; the SECOND EPOCH. Elements of the pure Greek Style defined; its Variations and Schools detailed.

LECTURE III.

HAVING, in my preceding Lectures, brought down the history and elementary principles of civil architecture from the time of the most ancient people of whom we have any record to that of the Assyrians and their cotemporaries, I shall proceed to develop the history and elements of the art, from the close of the foregoing period to the brilliant days of Attic splendour.

There is no certainty that architecture was practised in any degree approaching to the wisdom of the orders, earlier than the year of the world 2600.*

The Egyptians communicated a knowledge of the arts to the Phœnicians, the only nation which their narrow policy allowed to trade with them; and the Phœnicians carried it into Greece.

When mankind derived their whole subsistence from the fruits which the earth produced spontaneously, from their hunting, their fish-

* Monier.

ing, and their flocks, they lived in tents, and had no settled dwelling-places or habitation. The discovery of agriculture introduced other manners. They built and inhabited cities, and constructed temples, and other sacred edifices. Thus was agriculture the parent as it were of architecture, and the other arts of which they now had more need.

In after periods, the Greeks themselves became acquainted with Egypt, and, corresponding with the Egyptians, borrowed their arts, their learning, and their customs, as the Romans did afterwards from the Etruscans and the Greeks. The Egyptian records bear testimony to the visits of many of the learned men of Greece to the shores of the Nile.

Herodotus, the venerable father of history, travelled into Egypt, as well as all over his own country, Thrace and Scythia, Arabia and Palestine. In Egypt he minutely inspected the chief curiosities, and most remarkable places, conversing with the Egyptian priests, who informed him of their ancient history and made him acquainted with all their customs, sacred, civil, and warlike. Indeed, he speaks of their religious observances with such clearness and precision, and with such reverence and reserve upon some of their mysteries, that

it appears more than probable, that he was initiated into their ceremonies, and consecrated a priest of some of their orders.*

Among other eminent Grecians who are known to have visited Egypt, are Orpheus, Musæus, Melampus, Homer, Lycurgus, Solon, Pythagoras, Plato, Eudoxus, and Democritus.

The religion and laws of the Greeks are acknowledged to have been derived from the creeds and institutions of Egypt; and their architecture, I will endeavour to prove, in spite of the hypotheses and splendid fables of Vitruvius, to have been adopted and improved from the same source. Herodotus assures us, that the worship of the greatest part of the first gods that were adored in Greece came from Egypt;† and that all antiquity regarded the Egyptians as the first who paid a solemn and public worship to the Deity,‡ and therefore as the first inventors of sacred architecture. He excepts only Neptune; and says farther, that the worship of this deity was derived from Libya.§ Saturn, Jupiter, Ceres, &c. were the

* Herod. (Gale's edition) lib. ii. sec. 3, p. 91; sec. 65, p. 114; sec. 171, p. 156.

† Herod. lib. ii. n. 50. See also Diod. lib. i. p. 109.

‡ Herod. lib. ii. n. 4.

§ Ibid.

first gods of Greece. It is probable* that the Titans introduced these deities into Greece, and consequently, that those princes came from Egypt; for the worship of Saturn, Jupiter, Ceres, &c. was established, according to Diodorus, from time immemorial.† Hence the Titans taught the Greeks the first elements of the arts and sciences, and their earliest sacred edifices were likewise borrowed from them.

Plato advises to search for the roots of Greek words in some barbarous or foreign soil; so must we search for the roots or origin of Greek architecture also in a foreign soil, and that soil is Egypt.

Cadmus, who lived about fifteen hundred years before the Christian æra, and was the grandson of Agenor, king of Tyre, brought arts and sciences into Greece five hundred and sixty-two years after the building of the walls of Babylon. In the part of Greece where he settled, he built a city which he named after the celebrated Thebes, in Egypt, and has doubtlessly imitated the Egyptian style of architecture in his earliest structures. In corroboration of this, Pliny expressly says,

* De Goguet.

† Diod. lib. i. p. 17.

that Dædalus, the architect of the Grecian labyrinth, imitated that of Egypt in every respect. This same Thebes afterwards became so celebrated, that Germanicus made a journey purposely to survey its magnificent ruins.*

Ogyges, Inachus the first king of Argos, Cecrops, Cadmus, Lelex, and Danans founded successively the kingdoms of Athens, Argos, Sparta, and Thebes; but it was in the colonies of Asia Minor that sacred architecture began to exhibit its greatest splendour. The invention of the first two Grecian orders is attributed solely to the inhabitants of these countries, as their names, *Doric* and *Ionic*, sufficiently prove. The Corinthian did not appear till long after these two orders; it seems to have been invented in Greece, properly so called, and is the richest, the most magnificent, and the most elegant of all the Grecian orders, and perhaps of any that architecture ever invented. Among the earliest specimens of sacred architecture among the Greeks, was the superb temple of Jupiter, at Olympia, which, according to the calculation of Pausanias, was erected about the year 630 B.C. the temple of Diana at Ephesus, and the magnificent temple

* Tacitus, lib. ii. sec. 60.

of Jupiter Olympius at Athens, the foundations of which were laid by Pisistratus, and all of which prove the absurdity of the Vitruvian hypothesis of the invention of the orders.

The first material used by the Grecians in their buildings was timber ; next brick, which they learned the art of making from the Egyptians ; stone next succeeded, as in the temple of Apollo at Delphos, built by Amphictyon ; and afterwards, when they had accomplished the complete glories of their style, they immortalized it in marble. In the time of Pericles, the Athenians used Pentelican marble, and a species from Mount Hymettus, in their buildings. The sort called Parian was the most admired, but was nearly exclusively appropriated to sculpture. Bronze was also used for building in some of the earlier times, as Pausanias mentions several buildings of this costly material, particularly a small temple of Minerva, called, for this reason, *Chalciæcus*, which was standing in his days in Lacedæmon. Stones of an immense size, after the manner of the Egyptians, were also amongst their earliest methods of construction, whence has originated the tradition that they were the works of the Cyclops. In later periods they used stones of a smaller size, of irregular polygonal figures,

of four, five, or six sides, joined with the most exact care and nicety. The walls of the ancient city of Pæstum are thus built of huge polyhædric masses. Chandler, the Grecian traveller, discovered walls of this method of construction, near to Troëzene, Epidaurus, and Ephesus; and Dr. Pocock also in the island of Mytelene.

As architecture and other arts and sciences advanced, they used cubical and oblong stones, with which they constructed after two methods: one called *Isodomon*, which, as it intimates, was of courses of equal thicknesses and equal lengths; and the other, *Pseudisodomon*, where the height or thickness, and length of the courses differed. The first, or true manner, was always used in their grandest buildings, as being the most beautiful; and the latter, or false method, where beauty of appearance was of less consequence. Another, and still inferior mode was also used by them for works of lesser consequence, and called *Emplecton*. The front stones only of this manner were wrought, and the interior left rough, and filled in with stones of various sizes, or rubble. It was principally used in walls of great thicknesses, such as those with which they surrounded their cities. In

some instances they built their walls of brick, or common stone, and faced them with marble. Cement was seldom used by the Greeks in their best works, as the size and ponderosity of the blocks, and the great exactness with which they were squared, were sufficient for solidity, and made more perfect and complete joints.

The ancient Greek architects were judiciously careful, that every ornament they used should always accord in character and situation with the order they applied it to ; and both the ornament and the order were characteristic of the destination of the edifice : never building a prison of the Corinthian order, nor a theatre of the Doric. The external ornaments were bold, simple, and distributed with a judiciously sparing hand. The pediment of the temple, and the metopes of the frieze, as in those of the temples of Minerva and Theseus at Athens, and of Jupiter Panellenius at Ægina, were decorated with *bassi-rilievi*, and the angles of the walls with pilasters or *antæ*. The porticoes which surrounded their public squares, in which were often exhibited pictures and other works of art, appear to have been more elaborately decorated than their temples, theatres of declamation, and gymna-

sia ; and with regard to interior ornaments, little can be known, from the general destruction of those parts.

Even in the most flourishing and polished times of the Grecian states, so much did an austere simplicity of taste pervade this great people, that the private houses of the most distinguished and rich among them were in the same style of plainness and simplicity with their fellow-citizens. But as *luxury* increased, so did the splendour of their houses, and they began to bestow on them a more commodious distribution and greater ornament.

The character of the genuine architecture of the Greeks, in their brightest days, the days of Pericles, Alexander, Plato, Aristotle, Apelles, Phidias, Sophocles, and Euripides, is that of an imposing grandeur united to pleasing simplicity, elegance of ornament, and harmony of proportion in an eminent degree, together with a certain relation or coincidence of parts, as necessary in works of art as in those of literature.

Architecture, after the Greek style, may be divided into five principal epochs, according to the historical periods which gave rise to five corresponding styles. The *first* embraces the works

of Trophonius, who built the temple at Delphos and those of Agamedes and Dædalus.

This early period of Grecian history, which may be termed the heroic age, does not furnish any remains of architecture of positive certainty. Yet what lights are wanting from the deficiency of existing ruins are supplied in some degree by ancient authors, who however are not sufficiently explicit nor circumstantial in those details which alone could give us the information we require.

Homer, for instance, in speaking of the palace of Priam, says that it had at the entrance fifty apartments well built, in which the princes his children lodged with their wives, and that it was surrounded with porticoes of stone wrought with care. At the bottom of the court there were twelve other apartments for the sons-in-law of that monarch,* and a magnificent dwelling for Paris,† which tend only to prove that architecture was cultivated as an art in Asia Minor, but gives us no information as to style or taste.

Homer also describes the statues and other interior ornaments which embellished the palace

* Iliad, lib. vi. ver. 242. † Iliad, lib. vi. ver. 315.

of Alcinous,* but only in very general terms.

The *second* includes from the time of Rhæcus of Samos, and Theodorus, who lived about seven hundred years before the Christian æra, down to the time of Pericles; in which period flourished Ctesiphon, Metagenes, Andronicus, Eupolemus, Callimachus, Libon, and other eminent and celebrated architects.

The *third* epoch is the period from Pericles to Alexander the Great; under the former of whom, architecture reached the summit of its perfection; a perfection, of which Sir William Jones, with his accustomed truth and perspicuity, says:—"In those elegant arts which are called fine and liberal, it is really wonderful how much a single nation has excelled the whole world: I mean the ancient Greeks, whose sculpture, of which we have exquisite remains, both on gems and in marble, no modern tool can equal; whose architecture we can only imitate at a servile distance, but are unable to make one addition to it, without destroying its graceful simplicity; whose poetry still delights us in youth, and amuses us at a maturer age; and of whose

* Iliad, lib. vi. ver. 313, et seq.

painting and music we have the concurrent relations of so many grave authors, that it would be strange incredulity to doubt their excellence." In this brilliant epoch, flourished Hippodamus of Miletus, Phidias, Ictinus, and Callicrates, who were conjointly employed in the building of the Parthenon.

The *fourth* great epoch is from the decease of Alexander the Great to that of Augustus. Alexandria, under the dominion of the Grecian monarchs, was the principal school of the great architects of this period, among whom Dinocrates, whose proposal of forming Mount Athos* into a statue of Alexander the Great,

* "I cannot conceive," says Spence, in his entertaining Anecdotes, "how Dinocrates could ever have carried his proposal of forming Mount Athos into a statue of Alexander the Great into execution."—"For my part," says Pope, "I have long since had an idea how that might be done; and if any body would make me a present of a Welch mountain, and pay the workmen, I would undertake to see it executed. I have quite formed it, sometimes, in my imagination. The figure must be in a reclining posture, because of the hollowing that would otherwise be necessary, and for the city's being in one hand. It should be a rude unequal hill, and might be helped with groves of trees for the eyebrows, and a wood for the hair. The natural green turf should be left wherever it would be necessary, to represent the ground he reclines on. It should be contrived so, that the true point

and subsequent founding of Alexandria, is celebrated by Vitruvius, and Sostrates, were the most eminent. In this epoch are to be found the names of Saurus and Batrachus, who executed several works in Rome, and not being allowed to inscribe them with their names, used the expedient of carving* a lizard and a frog upon the pedestals as *anagrams* of their names; σαυρος signifying in Greek a lizard, and

of view should be at a considerable distance. When you were near it, it should still have the appearance of a rough mountain; but at the proper distance such a rising should be the legs, and such another an arm. It would be best if a river, or rather a lake, were at the bottom of it, for the rivulet that came through his other hand, to tumble down the hill, and discharge itself into it.”—*Spence’s Anecdotes, edited by S. W. Singer, p. 209.*

“It is somewhat singular that Mr. Pope should have thought this mad project practicable; but it appears there are still persons who dream of such extravagant and fruitless undertakings. Some modern Dinocrates had suggested to Buonaparte to have cut from the mountain, the Simplon, an immense colossal figure, as a sort of genius of the Alps. This was to have been of such an enormous size, that all the passengers should have passed between its legs in a zig-zag direction.”—*Mrs. Baillie’s Tour on the Continent, 1819. 8vo. p. 218.*

* Some of these anagrammatic sculptures are still to be seen in the churches of St. Eusebius and St. Lorenzo Fuori le Mura, at Rome.

βατραχος a frog. Cossutius was the first Roman architect who followed the style and manner of the Greeks, and was employed by Antiochus the Great in finishing the temple of Jupiter Olympius, at Athens.

The *fifth* and last great epoch comprehends from Augustus, in whose days Vitruvius is supposed to have flourished, until the removal of the seat of empire to Constantinople.

The pure architecture of Greece is superior to all that preceded it, and all that has been designed or executed since. Its architects and sculptors never violated the inherent properties of any object for an artificial effect; while those of Rome perpetually committed such violations, deteriorating all that they laid their hands upon. The irregular and fantastic variety of their orders, as I will hereafter show, proves the truth of the accusation, and powerfully opposes itself to the beautiful simplicity of the Greeks. The Romans executed works containing gross infringements of the sounder laws of architectural taste, which have, however, obtained a general and a lasting reputation.

Such is the Colosseum, such is the Theatre of Marcellus, such are the amphitheatres, such is the Pantheon; structures that excite wonder and seize upon our admiration, certainly not

for the faults with which they abound, but notwithstanding and in spite of them.

I most willingly allow the Roman architects to possess splendour, vastness of conception, a noble carelessness of expense, and a profuse redundancy of decoration in all their public buildings, which, as Quintillian says, is more easily cured than barrenness;* and if they are praised for knowledge of scientific construction, and bold command of the arch, the vault, and the cupola, I shall readily join in such praise; but of this I am certain, that the Romans never were eminent for that purity of taste, elegance, and simplicity of invention and construction, which characterize the Greeks above all others. Hence, we find so many more models of a fine style among the Greeks than among the Romans. Give me simplicity and good design, and keep your ornaments for children.

The Romans are indebted for all the excellencies of their architecture to the Greeks, and their deficiencies and redundancies are their own. Their earliest architects were all Greeks, and it was not till late in their history that they

* Facile remedium est ubertatis, sterilia nullo labore vincuntur.—*Quint.*

themselves made any figure in the arts of design. Thus all the Roman architects, with Vitruvius at their head, follow the plans that were laid down for them by the great master-spirits of Greece. They every where imitate the Greeks, and every where misrepresent them; as may be seen in comparing the Doric of the temple of Minerva Parthenon with that of the theatre of Marcellus, the best of the Roman specimens. Compare them together and you will find them comments upon each other; the one showing the commanding excellence of purity of style, the other the glitter and frivolity of false decoration.

What Cicero so truly says of the qualities requisite to a fine oration, may be as correctly applied to the qualities necessary to a fine piece of architecture: "Let* ornament," says this great writer, "be manly and chaste, without effeminate gaiety or artificial colouring; let it shine with the glow of health and strength."

Had the taste of Vitruvius been as refined and as unsophisticated as that of Cicero, the Roman purity in architecture would have been

* Ornatus et virilis et fortis, et sanctus sit, nec effeminatam levitatem, et fuco ementitum colorem amet; sanguine et viribus neteat.—*Cic.*

upon an equality with that of their fine and majestic language; on the contrary, we find very many of their buildings frivolously rich in ornament, and wretchedly poor in invention and good taste. For with fillets upon fillets, with bands over beads and beads over bands, cavettos and cimbras both right and reversed, with ornamented *plain faces*, (excuse the bull,) carvings and dentels and denticles, drops and flowers and festoons, and other tawdry, misplaced, and misapplied ornaments, they disfigured their spoiliations from the Greeks. For an example, look at the order of the Temple of Concord at Rome, which is called a Roman Ionic. Compare it with its lovely original in any of the Greek examples. Of this expensive barbarianism may be truly said that it is

“ Of such a frightful mien,
As to be hated needs but to be seen.”

POPE.

Yet such *things* find their admirers even in our days. Little was it to have been expected, after the introduction to this country of the pure forms and fine proportions of Greece by Athenian Stuart and his followers, that Batty Langley and Borromini would, in our days, aided by the powerful influence of the crown,

have driven the Athenian antiquities from our shelves, and the purity of Grecian art from our public streets, and substituted imitations of the altogether inferior productions of Rome and modern Italy.

But so unfortunately it is, and we need not go far to witness it; and, at a more proper period of these Lectures I will revert to it more fully. At the same time I disclaim possessing any of those feelings which are usually attributed to such as investigate, and speak honestly of, the works of their cotemporaries. The field of genuine art is large, and ever will be so; it has never yet been so totally explored as to exclude from its delightful labours any who truly devote themselves to its cultivation. I repeat, therefore, that I disclaim those feelings, and am prepared for and armed against the attacks of any who might impute to me such unworthiness. But when the public character is at stake, those who see the causes of its depression should be bold, and I trust the importance of the object may claim pardon for the digression.

To return. About the end of the third age of the world, or about the year 2496 B.C. Athens was founded; which, however, was not the first city established in Greece, for

many writers suppose that Argos, which was founded by Inachus,* was of greater antiquity than Athens, and Sicyone than either.

Athens was founded by Cecrops, a native of Sais, a city of Lower Egypt,† who may be called its first king; for although Ogyges is by some‡ invested with this honour, it is not known who he is, nor whence he came. Several kings are named between Ogyges and Cecrops, but their history is quite unknown. In the reign of the last of these unknown princes, Cecrops arrived in Attica§ at the head of an Egyptian colony, and brought with him from Egypt into Greece the first principles of all the arts and sciences; and this is a farther proof, if any were necessary, of the Egyptian origin of Grecian architecture, and of the fallacy of the Vitruvian hypothesis of the origin of the orders.

The royal family of Athens had the honour of giving birth to the celebrated Dædalus, whose name is synonymous with excellence in all the arts of design, and has furnished an epithet (Dædalian) indicative of supreme taste.

* Strab. lib. viii. p. 578. † Diod. lib. i. p. 33.

‡ Euseb. Chron. lib. ii. p. 66. Paus. lib. ix. c. 5.

§ Diod. lib. i. p. 33. Paus. lib. i. c. 2.

Dædalus travelled into Egypt to see the Labyrinth, from which he formed the design of that which he afterwards built at Crete; and though it was considerably less in size than the Egyptian, it was so celebrated for the beauty of its architecture and sculpture, that it was reckoned by Pliny among the seven wonders of the world.*

After Cecrops there was a succession of sixteen kings. Erectheus VI.† was among the most celebrated, and had a temple erected to his memory, which is supposed to have been on the site of the present temple of the same name. From Erectheus to Theseus, the history of Athens offers little remarkable. The age of Theseus was that of a race of heroes. This monarch enlarged and adorned the city,‡ made it the metropolis of Attica, and was commemorated after his return from Crete, and in honour of his victory over the Minotaur, by the beautiful temple which bears his name. It was not the only one erected to him in his life-time by the grateful Athenians. They consecrated several to him: the hero accepted four, and made them dedicate the

* Plin. lib. xxxvii. c. 13.

† Apollod. lib. iii. p. 198, et seq.

‡ Isocrat. Plut. p. 11.

others to his kinsman Hercules, in remembrance of his deliverance from prison by that heroic demi-god. The principal of these structures, that now known by the name of the Temple of Theseus, contains in the metopes of the eastern front ten of the labours of Hercules, and on the returns of the portico eight of the achievements of Theseus himself, four on each side. This temple is a fine example of the Doric order in its greatest purity; and casts from its metopes are among the invaluable Elgin collection at the British Museum.

On all these accounts Theseus was esteemed the second founder of Athens, and probably purified the style of its architecture. He also divided the people, after the manner of the Egyptians, into three classes.*

The interval between Theseus and Codrus, the son of Melampus, the seventeenth and last king of the Athenians, who, in his war with the Dorians, deliberately gave up his life† for the safety of the state, affords but little architectural or historical detail.

After the death of Codrus, Athens was go-

* Plut. p. 11.

† Codrus pro patria non timidus mori.—Hor. Carm. lib. iii. od. 19.

verned by perpetual *archons*, who had neither an absolute nor a regal power, but were subject to those laws which they were empowered to exercise for the good of the whole state. Thus the monarchical form of government was changed to a republican.* There were thirteen of these perpetual magistrates, and this form of government lasted three hundred and fifty years.

The last perpetual archon was Medon, the son of Æschylus, after whose death the dignity of archon ceased to be perpetual, and was limited to the term of ten years.† There were seven of these limited chief magistrates, beginning with Charops, in the year 754 before Christ, and ending with Eryxias, who having been banished, the form of government was again changed. Many variations took place in the Athenian government till the time of Solon, who new modelled and reformed the state, and likewise repaired the public edifices.‡

The republic continued in this form for about eighty years, when Pisistratus usurped the government, annihilated the tyranny of the people, and improved the state in every way. He founded, in the latter part of his reign, one

* Justin, lib. ii. c. 7. Val. Max. lib. v. c. 6, p. 489.
Pausan. lib. vii. c. 25.

† Pausan. lib. vii. c. 11.

‡ Plut. in Solon. p. 85.

of the finest libraries that ever was collected in Greece, built the magnificent temple of Jupiter Olympius, at Athens, and made his court the resort of genius.

After the death of Pisistratus, he was succeeded by his sons Hippias and Hipparchus. The latter was killed by Harmodias and Aristogiton, and Hippias, his brother, was banished for his tyranny.

Many other revolutions took place in Athens, till the illustrious Pericles changed the whole form of government, and gave to Athens her brightest era. His age is now distinguished by all the graces of art, and needs no other eulogium than those standards of taste and style which he has left to instruct and enlighten the world.

Delightful to the eye of taste are the mysterious and solemn vistas of an ancient English cathedral: grand and majestic are the ruins of the Nerva Forum: awfully severe, impressive, and overpowering is the Colosseum of ancient Rome: elegant is the circular temple of the Sibyl at Tivoli, which graces, with its endless rotunda and sweetly proportioned cupola, its own delightful surrounding country, and many of the sweetest landscapes of the tender and fascinating Claude: magnificent are

the triumphal arches and aspiring columns of imperial Rome.

Yet, neither the magnificence of these triumphal structures with all their maddening associations; nor the sweet proportions of the fane of Tivoli, with the fascinations of its scenery, and the magic pencil of Lorraine; nor the grandeur of the Roman forum in its pristine perfection; nor the majesty of the Colosseum, great in ruins and sublime in dust, or filled with the whole population of a mighty city, headed by an Augustus;—are equal in majesty, dignity, awfulness, splendour, *perfection*, to the temple of the virgin goddess of the Greeks.

The arrangement of this celebrated edifice may be seen from its plan in Stuart's Antiquities of Athens; and the style of architecture, the purest and grandest Doric, from many engraved views. This temple is two hundred and twenty-seven feet in length, which, for the purpose of immediate comparison, I take leave to mention is only one foot short of the length from the inside of the north door of the principal transept of St. Paul's, to the inside of the south door of the same transept; and one hundred and one in width, the width of the nave and aisles of St. Paul's on each side of the

cupola between the walls ; and sixty-five feet six inches high, to the summit of the pediment, which is somewhat higher than the bases of the composite order of columns of the second story of St. Paul's taken from the ground. These general dimensions may serve to give some idea of its magnitude ; but its grandeur and sublimity is not the result of its size.

It stands upon a pavement elevated on three steps, and was surrounded by forty-six columns, thirty-four feet one inch high ; eight feet in the front of each portico, and seventeen on each flank, including the angle columns. The porticos were both surmounted by pediments filled with statuary, of which some of the most glorious remains, which have immortalized the name of Elgin, and do honour to the British legislature, form that collection at the British Museum which Canova declared was alone worth a journey from Rome to see, and which has formed an epoch in his style, as will in due time be witnessed with pleasure by this nation.

A contemplation and examination of this wonderful structure, in all its bearings, would alone occupy more than an entire lecture ; and I most reluctantly withdraw your attention from it to an examination of the principles of

the style and elements of the sacred architecture of the Greeks; another fine example of which is the temple of Jupiter Panellenius, in the island of Egina, which was recently discovered by Messrs. Cockerell, jun. Foster, Linckh, Baron Haller, and others; than which discovery of Grecian architecture and sculpture none of modern times can be considered as more extraordinary, or more interesting and important to the history of art. It is only to be regretted that, having been discovered by English travellers, its sculptural remains do not grace our national museum, as well as those of Athens and Phigaleia.

The inhabitants of the island of Egina were the first European Greeks* who became considerable for their intelligence in maritime traffic. Pausanias† relates, that soon after the return of the Heraclidæ in Peloponnesus, the Eginetans had much commerce in Greece. Ælian,‡ Strabo,§ and other authors, believe that the builders of this beautiful temple were the first among the Greeks who brought coined money into use.

The power of the Eginetans was destroyed,

* Goguet, vol. iii. p. 156. † Paus. lib. viii. c. 5.

‡ Æl. Var. Hist. lib. xii. c. 10. § Strab. lib. viii. p. 577.

after a short but brilliant career, by the Athenians, in the time of Pericles,* who drove them from their island, and annihilated their wealth and their power in a moment.

The sculptures of this fine temple are now at Munich, and are the property of the Prince Royal of Bavaria. They were discovered under the fragments of its architecture, where they had been concealed from the rapacious conquerors of Greece for a period of nearly two thousand years. They have been united, and the very few parts of them which were deficient restored at Rome, by Thorwaldsen, the celebrated Danish sculptor.

Mr. Cockerell, in his excellent paper on these sculptures, published in the 12th No. of the *Journal of Science and Arts*, says:—"But what may be considered of still greater interest, and that which renders the discovery of the first importance to architecture as well as to archæology is, that they afford us a complete example of the great historical compositions of entire statuary, with which the Greeks enriched the pediments of their temples; a species of representation hitherto unknown to us, and

* Goguet, vol. iii. p. 156.

which far exceeds in scale and splendour of effect any which the moderns have attempted : for the greatest efforts of art hitherto employed in the grand pictures (the *stilo machinoso*) of the Italians, cannot vie with compositions of this nature, any more than the materials by which either were effected can be compared together."

The style of these sculptures is mannered, and possesses no variety of expression. "A smile is seen on all the mouths, like that of an opera dancer; the cheeks are hollowed; the lips are thick; the nose is short, but angular and prominent; the eyes are protruded," probably for effect; "the forehead is flat and retiring; and the chin is remarkably long, and rather pointed; the hair and drapery are arranged with the greatest precision.

"The style of the architecture is pure and beautiful, and its order a grand and chaste Doric. In it we find a very remarkable and very ancient example of the practice which prevailed among the Greeks of painting their sculptures; for the style and execution of the colours of the temple prove that they cannot be of any other date than the original construction."

“ In order to relieve the statues, the tympanum of the pediment was of a clear light blue : large portions of the colour were still seen on the fragments,” says Mr. Smirke, “ as we raised them from the ground. The moulding, both over and under the cornice, was painted ; the leaf was red and white, and the superior moulding of the cornice was painted in encaustic ; the colours being on marble, and more exposed, had long disappeared, but the relief in which the part so covered was found indicated very perfectly its outline.”

A publication of the details of this interesting and important discovery may ere long be expected on an enlarged scale by their royal owners ; casts from them, I am happy to learn, are also expected, according to an agreement made by the discoverers. The exertions of Messrs. Cockerell and Foster to acquire the originals for this country are well known and justly appreciated ; we can only lament their failure, which can in no way be laid to the charge of these gentlemen.

The Eginetans formed a school, and after them in succession, but perhaps before them in point of merit, are the Corinthians.

The inhabitants of Corinth were very early

distinguished* for their riches and their maritime force. Few situations are more favourable for commerce than that of Corinth; and Homer† and Thucydides‡ frequently gave Corinth the epithet of *opulent*.

The genius§ and inclination of the Corinthians led them rather to cultivate commerce and the peaceful arts than military enterprises. Satisfied with gaining wealth by honourable means, they next sought to enjoy it with taste, and gave themselves up to the luxuries and refinements which their opulence afforded them. They applied themselves also to render their city the most beautiful and magnificent of Greece, and spared nothing to accomplish it. Corinth was filled with temples, palaces, theatres, porticoes, and a vast number of other structures, as commendable for the rarity of the marbles employed in their construction as for the elegance of their architecture. These magnificent edifices were moreover enriched with an infinite number of columns and statues of the most precious materials, and

* Goguet.

† Iliad, l. 2. b. v. ver. 77.

‡ Thuc. lib. i. p. 12.

§ Goguet, vol. iii. p. 157.

executed by the hands of the most famous masters. Luxury, opulence, and effeminacy displayed themselves in every part of Corinth. She was, without exception, the richest and most voluptuous city that could be found in all Greece.

The invention of the Corinthian order shall be spoken of in its proper place, but of the sacred architecture of the inhabitants of Corinth we have little left to guide us. There are ruins of a grand and solemn temple of the Doric order; its style is of an early period, as the shortness of the columns, with the great height and form of the architrave, clearly prove. The proportions of its columns and capitals are nearly similar to those at Pæstum, which will be described in a subsequent Lecture; while the graceful form of its echinus, and its great projection, have a very striking appearance.

To the sacred architecture of the Greeks, as exhibited in their various temples, we are indebted for the purest and best canons of architecture that the world has ever seen.

The elements of this pure style are three classes or modes, called orders; while those of the Romans, their despoiling imitators, are five.

Nature dictates but three modes of building, which are clearly and distinctly visible in every style of the art; namely, the *robust*, the *chaste*, and the *elegant*. These the Greeks have embodied in their Doric, their Ionic, and their Corinthian. The Romans, restless after innovation, sighing for more worlds of art to conquer, and pining after more than all, would have one *more elegant than* the elegant, and *more robust than* the robust. Hence their Tuscan, which is, as a musician would say, but a variation upon the theme of the Doric, and their Composite, which is any thing but an improvement upon the Corinthian.

Architecture, that is to say, classical architecture, is generally divided into certain modes or systems, called orders, named from the country where they are supposed first to have been used:—as the Tuscan from Tuscany, the Doric from Doria, the Ionic from Ionia, the Corinthian from Corinth, and the Composite or Roman from Rome. Now, although the preceding orders form five in number, yet three only are to be received as such in the pure or Greek system of architecture. The Tuscan, as I have already said, and will hereafter show, when I arrive at the Roman system, is merely a variation of the Doric, and the Composite a

corruption of the Corinthian, and too much like it in its essence and character to be distinguished by an untutored eye, or to be acknowledged a distinct genus or order by the critic.

Our delightful poet Thomson, (whom, by the way, it is the fashion among some hypercritics to decry,) who may be called the poet of the fine arts, and whose taste was formed by a long residence at the seats of ancient art with the son of the Lord Chancellor Talbot, so beautifully and characteristically depicts the three orders in his "LIBERTY," that I cannot refrain from quoting him, as applicable to the purpose of detailing and defining them. In the second part of that poem he personifies public virtue in Greece as a goddess, and the sister-arts of Painting, Sculpture, and Architecture as

" The Graces they
To dress this fairest Venus."

And, farther on, he states that architecture was

" By Greece refined,
And, smiling, high to bright perfection brought.
Such thy sure rules that Goths of every age
Who scorned their aid, have only loaded earth

With laboured, heavy monuments of shame,
 Not those gay domes that o'er thy splendid shore
 Shot all proportions up."

* * * * *

—————" First, unadorned
 And nobly plain, the manly DORIC rose ;
 Th' IONIC then, with decent matron grace
 Her airy pillar heaved ; luxuriant last,
 The rich CORINTHIAN spread her wanton wreath.
 The whole so measured true, so lessened off
 By fine proportion, that the marble pile,
 Formed to repel the still or stormy waste
 Of rolling ages, light as fabrics looked
 That from the magic wand aerial rise.
 These were the wonders that illumined GREECE
 From end to end."

These orders undoubtedly derived their origin from the chance-built huts and cabins of the first inhabitants of the world, and which as doubtlessly contained in themselves the constituent elements of architecture, till drawn forth by the hand and eye of taste, as the marble block contained the statue whence Canova drew forth his " Hebe, ever young." As we cannot now derive our knowledge from a better source than from Vitruvius, he must be our guide through this obscure path. In my description of the orders I must confine myself briefly and generally to the three classi-

cal orders of antiquity, or run the risk of again exceeding the bounds I ought to prescribe to myself for one Lecture.

Vitruvius, our best authority, indifferent as he is for historical truth, informs us that when Dorus, the son of Helenus and the nymph Optice, reigned over Achaia, and all Peloponnesus, he built in the ancient city of Argos a temple to Juno, which was formed, by chance, of the order since called Doric, and afterwards used in the other cities of Achaia while yet the ratio of its symmetries was undiscovered.

Afterwards (he continues) the Athenians, according to the responses of the Delphian Apollo, by the common consent of all Greece, sent out thirteen colonies at one time into Asia, and, appointing a leader to each colony, they gave the command to Ion, the son of Xanthus and Creusa, whom Apollo of Delphos also acknowledged to be his son. These colonies were led into Asia by Ion, who seized upon the country of Caria, where he built the large cities of Ephesus, Miletus, Myunta, Priene, Samos, Teos, &c.

These states were called, from their leader, Ionia, and here they began to erect and dedi-

cate temples to their deities, and first they built one to Apollo Panionios in the manner they had seen in Achaia, which manner or mode they called Doric because they had first observed it in the Dorian states. In this temple they intended to use columns, but not knowing their symmetries, and while considering how they should proportion them, so that they might support the weight and at the same time have a graceful appearance, they measured the length of the human foot, which, as they found to be nearly the sixth part of the height of a man, they used this proportion for their columns, making the thickness of the shaft at the bottom one-sixth part of the height, including the capital. Thus the Doric column, having the proportions of the human body, began to be used in building with solidity and beauty.

Afterwards, being desirous of building a temple to Diana, they invented a new order on similar principles, using the proportions of a female. They made the bottom diameter of the column the eighth part of its height, and, that it might appear the more graceful, they added mouldings round its base, to represent the shoe, and volutes to the capitals to imitate the twisted braids of hair falling on each side,

and the cymatium and encarpæ the locks of hair braided and arranged over the forehead. They also fluted the shaft from top to bottom like the folds in the garments. Thus were the two species or orders of columns invented,—one representing the strength and simplicity of man, the other the elegance and fine proportion of woman. This latter order was called Ionic, says Vitruvius, because it was invented by the Ionians. But subsequent architects, who wished for lighter proportions, have often made the height of the Doric column seven diameters, and that of the Ionic eight and a half, destroying the character and beauty of each.

The third classical order, which is called the Corinthian, is imitative of the delicacy of shape and slenderness of proportion of a young virgin. “For the limbs,” says this ancient writer, “at that early age, are formed more slightly, and admit of more graceful decorations.” The invention of its capital is thus related by Vitruvius.

A Corinthian virgin just marriageable, being attacked with a fatal disorder, died. After her interment, her nurse collected some vases and toys, which pleased her when living, put

them in a basket, and placed it on the top of her tomb, covering it, that it might endure the longer in the open air, with a tile. The basket being placed on a root of acanthus, depressed it in the middle, occasioning the leaves and stalks which grew up in the spring to encircle and twine round the basket ; but being resisted by the angles of the tile, they convolved at the extremities in the form of volutes. This was seen by Callimachus, who, on account of his taste and skill in sculpture, was called Catatechnos ; who, delighted with the novelty of its figure and its delicate and appropriate form, encircled by the beautiful foliage, formed from its model a new capital to some columns he had sculptured for Corinth, thus composing this most elegant of the orders.

The above hypothesis I conceive to be nothing but a splendid fable ; not agreeing with Mr. Wilkins, who says, that “ of all the opinions entertained by Vitruvius on the origin of the orders of architecture, that relating to the invention of the Corinthian capital *seems* alone entitled to any attention ; both because the reputed age of Callimachus, its supposed inventor, approaches within certain limits to the first recorded instances of the introduction of

the order into Greece; and because"—pray mark *this* because—"the recital is less open to the charge of absurdity and fiction." With all due deference to such an authority, I conceive the account just quoted of the origin of the Doric and the Ionic not only less open to the charge of absurdity and fiction, but as nearly historically true; while the Vitruvian hypothesis of the vase of toys, the protecting tile, and the accommodating acanthus, appears to me more worthy the reveries of a poet (and a fine poetical episode it certainly is) than of the historian of so matter-of-fact an art as is architecture.

The Corinthian order is clearly derived from the architecture of Egypt, adapted, refined, and nationalized, as I will endeavour to prove. First, Cecrops, the founder of Athens, was an Egyptian; next, Dædalus, the earliest Athenian artist, visited Egypt to investigate and study the principles of the fine arts. Added to these facts, it is also well known that the Greeks borrowed their laws, their manners, and their customs, from the Egyptians, and purified them in the alembics of their own brighter genius.

A colony at first always imitates its mother

country, and afterwards as surely does all in its power to render its origin forgotten. When I refer to the present examples, surely the Egyptian origin of the Corinthian capital cannot be denied. Their elements are incontestably the same, namely a vase surrounded by flowers and covered with an abacus: the story of the Corinthian girl was probably invented by a Grecian poet, and related as genuine by Vitruvius.

In corroboration of the Egyptian origin of the Greek order, I take leave to bring forward as an additional authority, the learned M. Quatremere de Quincy, the present secretary to the French Academy, who supposes that even the Ionic also was borrowed from the Egyptians, and is a beautiful adaptation of their capitals of the head of Isis. As the learned Frenchman's hypothesis possesses considerable ingenuity, I will endeavour to explain and illustrate it. The ears of the Egyptian capital he metamorphoses into the Grecian volutes; the braids of hair on the forehead into the helixes or threads of the capital; the throat into the colarino or necking; and so on.

Following up this hypothesis, the Doric may also be said to have been drawn from the rude

types or prefigurations of the Egyptians, which contain all the elements of the beautiful examples of the Greeks. Belzoni says, that the Isis of the Egyptians is the same personage with the Io óf the Greeks; therefore, capitals designed after the head of this goddess are Isis-like, Io-like, or Ionick.

Referring to the buildings, it will be seen that the metopes, or spaces between the triglyphs of the Parthenon, are filled with sculptures; which sculptures were those exquisite combats of Centaurs and Lapithæ in the Elgin collection. These metopes in the earliest Grecian buildings were open, and the triglyphs justly represented the ends of the beams, their types, as the following quotation from the *Iphigenia in Tauris* proves. Pylades is counselling Orestes to scale the Doric temple of Diana, and says to his friend,

“ But when the eye
Of night comes darkling on, then must we dare,
And take the polish'd image from the shrine,
Attempting all things; and *the vacant space*
Between the triglyphs, mark it well, enough
Is open to admit us; by that way
Attempt we to descend.”

Iphigenia in Tauris, Potter's version.

The next portion of my subject is the earlier

architecture of the Grecian cities and colonies. The most ancient specimens we know of are those of Corinth; but a detailed description and investigation of their qualities must be deferred till the next Lecture; and after treating of these specimens of the finest period of the art, I would say to the student and amateur, investigate, compare, and reason for yourself, and choose under which banner you would serve.

I must, ere I conclude, like Hamlet still harping upon the daughter of Polonius, still harp upon the necessity of public patronage, to enable our great and glorious country to elevate itself to a level with the Greeks in art. Such a judicious, liberal, and efficient patronage, as "comes down as the rain, and distils as the dew, as the small rain upon the tender herb, and the showers upon the grass."* A patronage which a great government and an enlightened nation alone can give, and which is to the arts what the Nile is to Egypt, the prolific source of all excellence.

That neglected historian of the fine arts, Bromley, asks, "What was the cause that in a hundred and thirty years the arts rose from

* Deut. xxxii. 2.

infancy to full maturity, and accomplished all the vigour, perfection, and fame with which they have ever been attended upon earth? What was the cause," he asks, "which gave them that extraordinary growth?" It was *that* without which the fine arts are more imbecile and weak than all the other gifts of man; with which, their lustre rivals any that from other sources can ever encircle the human head. It was *patronage*—settled, systematic patronage; patronage that rises not merely to the employment but to the advancement of talent; patronage fed by a genuine sense of elegant improvements, as well as by views of glory. Till *such* a patronage arose in former days, vain was all other admiration, applause, or encouragement of the arts, although backed by the rich and great, or perhaps by the show of royal gold. Till such a patronage arose, how did the arts struggle no less than three centuries for a faint existence, scarcely able to keep towards strength, although they wanted not occasionally the encouragement of individuals, and at all times the applause of all? What could they gain from the casual favour of a Candaules more than the weight of his money? The picture could make no more proselytes in Greece, let its merit be

what it might; it was gone with the enraptured monarch into Lydia, where his zeal, once roused so high for the works of the pencil, had probably soon subsided, being satisfied with what it had obtained.

Yet I have heard it asserted, and by persons of high authority, as critics and as patrons, that patronage will not create artists, and that it is better to deter than to delude. Granted; but I would reply, that the greatest artists *have* been produced in the golden sunshine of patronage. Phidias flourished under the munificence of Pericles; Dinocrates under that of Alexander; and hundreds under the splendid employment of Hadrian. To descend to later times, Michelangiolo became so rich by the practice of his art, that he presented his porter with two thousand crowns. Raffaello, in a letter extant, acknowledges himself to be worth twelve thousand crowns of gold, obtained by the same honourable means, having had the most munificent prices for all his pictures in the Vatican. He had also been largely employed as an architect; he lived like a prince in splendour and in affluence. Giulio Romano also lived at the court of Mantua, in all the enjoyments and elegancies of wealth. Titian lived like a nobleman, and

died rich from his professional gains. Rubens lived in a perpetual golden shower of patronage, and observe the golden fruits he thereby produced. Thus also lived Vandyke; thus also Sir Joshua Reynolds: and with respect to the Greek painters and architects, in addition to the enthusiasm with which they were hailed, they were rewarded with the most unaccountable prices for their works.

The *greatest* men in the arts have been those who made the greatest impression while they were *alive*, and were rewarded most munificently for their works.

So much for the cant of Vasari and his followers about the greatest works being performed in obscurity, and while their authors were suffering under the oppressions of poverty.

The present day is too late, and the present age too enlightened, for such assertions to obtain belief.

LECTURE IV.

The Causes of the Superiority of the Greeks in ARCHITECTURE traced, and considered comparatively with their other Arts and with their Literature. Constituent Elements of their purest Style. The Orders and their Divisions illustrated and described. Their different Examples. The Seven Orders of Temples. Rules of Intercolumniation and other Architectural Details. Greek Architecture traced through its Colonies, Pæstum, &c. till its Establishment in Etruria. Character of the Etruscan School.

LECTURE IV.

THE great superiority of the Greeks in architecture is to be traced to causes similar to those which occasioned their pre-eminence in every thing else: namely, a deep investigation into first principles,—an accurate perception of the *elements* of all that they attempted to execute.

A similar investigation, and a similar perception or knowledge, and nothing else, will produce the like effects in our country and in our times. In Greece, no painter proceeded without acquiring a knowledge of anatomy and drawing; which have been declared, even in our Royal Academy of Arts, to be unnecessary studies. Their sculptors carved their own marble, and their architects understood design, construction, perspective, and composition, and had a clear preconception of effect.

I know it has been said that the Greeks did not understand anatomy, and did not dissect; that we are uncertain as to their knowledge of geome-

try, because Euclid, the earliest author in that science with whom we are at present acquainted, lived considerably after the construction of their best edifices ; and that our certainty as to their knowledge of perspective is still less. It has also been said, in corroboration, that the Greeks had laws prohibiting dissection ; therefore they did not dissect. "The exception," says one of our great luminaries, Lord Coke, in his celebrated treatise on Lyttleton, "proves the rule." Therefore, even did not those sculptural wonders which now grace our national Museum, and the anatomical details which are so abundant in the poems of Homer, prove the depth of their anatomical knowledge, this very exception proves that they *did* dissect, and that it was even necessary to enact laws against the practice. Among the most remarkable proofs of the deep knowledge of the Greeks in anatomy, the Theseus and the Ilyssus of the Elgin collection exhibit the perfection of art, and show the most scientific research into anatomy and the natural history of man, "by their delicate and appropriate hinting at muscles under the skin, as they appear through that integument, even showing muscles that are so deeply seated as not to be visible but in the peculiar

action therein represented.”* They are the only marbles I ever saw that looked palpably like flesh; and when I first saw them unpacked, covered with dust and rubbish, and in a damp pent house, in company with the first historical painter of the day, whose words I have just quoted, they struck me as visions of other times. The genius of

“Ancient Greece! whose form sublime,
Gigantic striding, walks the waves of time,”†

hovered around us, and they appeared to me *then* as they have ever since, heroic forms of heavenly proportions, held by the magic wand of a Prospero in temporary inaction, and that in a moment the spell would be withdrawn, and they would leap into life. They appear like petrifications of heroic nature, and yet they are but *fragments* of Grecian taste; of that skill which envious detractors, with “see-saw sceptic scruples hint,”‡ knew nothing of anatomy. Their ignorance of drawing and of construction was probably as great, and I shall leave one with the other.

Did even their ignorance of geometry and perspective depend upon similar grounds, name-

* Haydon on the Elgin Marbles.

† Shee. ‡ Heroic Epistle.

ly, the period of Euclid, who lived after the time of the building of their greatest works, and mentions nothing of perspective in his treatises, I would leave the matter to the same proofs, and let their works speak for them. But, as I have before proved, the Greeks availed themselves of all the accomplishments of their masters, the Egyptians; and they had attained great proficiency in geometry long before Euclid had laid down, or rather embodied in one work, the profound and irrefutable demonstrations that pass under his name. The authors of many of those theorems are well known, but this is not the time to dilate upon them.

The works of the early Greeks, the *whole* of their works, bespeak their profound knowledge of this science; and Homer, Hesiod, Herodotus, Diodorus, Vitruvius, Strabo, Seneca, Pliny, and Plutarch, agree in their excellence, and inform us of all that was known in their own time, and before it, of the arts and sciences. The well-known anecdote of the contest between Phidias and Alcamenes, to produce a statue of Minerva, that was to be placed on the summit of a high column, in which Phidias allowed for the height, the distance, and the optical effect occasioned thereby, proves their acquaintance with perspective

also ; indeed all the rest of their works, wherein height, distance, and picturesque effect were studied with the greatest accuracy, equally establish the fact. Columns of a great size were made to diminish less than those of a smaller height ; angle columns were formed of a greater thickness than those situate between other columns or pilasters ; all for an optical effect that nothing but a profound knowledge of perspective could have produced. In addition to these ocular demonstrations of their knowledge of this most essential branch of the elements of all the arts, if farther authority be required, Vitruvius says, in the præmio or preface to his 7th book, that when Æschylus wrote his tragedies, which was about the time when Xerxes invaded Greece, or about the year of the world 3490, “ Agarthacus made scenes, and left a treatise upon them ;” and that “ after him Democritus and Anaxagoras went still farther in that way, showing the power of imitating nature, by making all the lines to vanish to one point, as to a centre, when viewed at a fixed distance ; by which means they were enabled to represent in their scenes the images of real buildings, as they usually appear to the eye ; whether they were painted on horizontal or upright surfaces, they exhibited objects near and at a distance.”

But there would be no end of refuting absurdities like the foregoing, which, but from their having been put forth from a place of some authority, I would not have dwelt upon at all. It would not be surprising next to hear, with the Parthenon in view, that the Greeks did not understand construction, could not build, and had no taste or knowledge in architecture.

I have before demonstrated, by the proofs given us from existing remains that, as the historians of Greece did not exaggerate in their praises of their architecture and sculpture, so we may give implicit faith to their accounts of the great eminence of their painters, who could not, from this authority of Vitruvius, have been ignorant of perspective, any more than they were of anatomy, or any other requisite element of art. To the Greeks, therefore, and to them alone, let the student look for grandeur of composition, and, indeed, for all the laws of architecture, painting, and sculpture. Apollodorus, the master of Zeuxis, said of this his illustrious pupil, "that when the doors of his art had been opened to him, he walked in and carried away *all that belonged to it.*"

The grand divisions of the architecture of Greece are, FIRST, the three orders of columns, technically called *the orders*: SECONDLY, the

several orders of temples, or their sacred edifices; and, **THIRDLY**, the various methods of intercolumniations, or manner of regulating the distances of columns.

It is these great or primary divisions, and their due observance, which entitle the architecture of the Greeks to the dignified epithet of the *wisdom of the orders*. All other systems of architecture, the Roman excepted, (which, as we should always bear in mind, is entirely borrowed from that of Greece,) are styles; classified according to the countries whence they proceed, and subdivided according to the dates of their construction. Such are the Egyptian and Persepolitan, the Chinese, the style called Gothic, and their several tribes or classes. These evidently are not reducible to the rules of an order of architecture.

First.—THE ORDERS.—The Greek orders of columnar architecture are three—the *Doric*, the *Ionic*, and the *Corinthian*. Each of these orders is divided and subdivided as in the following table, which will be hereafter explained *seriatim*.

The Greek System of the Orders.

Names.	Divisions.	Subdivisions.	Constituent parts.
Doric	Column	Capital	Abacus—a paralleloepidon.
			Echinus—conical and circular.
	Entablature	Shaft	Annulets—angular and circular.
		Architrave	Conical—plain or fluted.
		Frieze	Single and plain.
		Cornice	Triglyphs and metopes.
			Composed of mouldings, plain faces, fillets, &c. with mutules over the triglyphs and metopes.

Column	Capital	{ Abacus—an echinus without a fillet and parallelogramatic in its plan.	
		{ Volutes on two faces, and foliage on the other two.	
	Shaft	{ Colarino—composed of egg and tongue, and astragal.	
		{ Conical, and sometimes fluted.	
	Base	{ Attic—consisting of two astragals, or tori, divided by fillets, a scotia, a fillet, and a plinth.	
		{ One or two faciæ.	
	Architrave	{ Plain, or enriched with sculptures.	
	Frieze	{ Fillet—plain.	
	Entablature	Cornice	{ Cymatium, or cima recta—sometimes enriched with lions' heads and leaves.
			{ Tenia—always plain.
{ Corona—always plain in the best examples.			
{ Cima reversa, or echinus and fillet.			
{ Dentels.			
{ Moulding and fillet.			

IONIC

Names.	Divisions.	Subdivisions.	Constituent parts.
CORINTHIAN	Column	Capital	{ Abacus—an echinus, fillet, and hollow, square on its plan, truncated at the angles, and hollowed on the four faces, with a rose in the centre of each.
		Shaft	{ Basket—plain, except where covered by the foliage.
		Base	{ Foliage—leaves of various sorts and volutes.
			{ Conical—mostly fluted, and sometimes cabled.
	Entablature	Architrave	{ Consisting of a curve, connecting it with the shaft, a fillet, a double torus, a fillet, a scotia, a fillet, and larger torus on a plinth.
		Frieze	{ Two or three faciae and mouldings.
		Cornice	{ Plain, and sometimes enriched by sculpture.
	{ A fillet.		{ A cymatium or cima recta, sometimes plain, and sometimes enriched with foliage, lions' heads, &c.
			{ A fillet and cima reversa, enriched by foliage.
			{ A corona, always plain on the face and panelled below.
		{ Modillions ornamented with leaves.	
		{ Various mouldings in bed mould.	
		{ Dentels.	
	{ Fillets and mouldings.		

An order of architecture may be defined as one or more columns raised perpendicularly to the horizon, with horizontal beams or stones, called an architrave, laid upon them, reaching from column to column, supporting a plain surface, called the frieze, which is immediately under a parallel range of mouldings, called the cornice.

Every order is divided into two great or principal parts, the COLUMN and the ENTABLATURE, which again have their separate and several sub-divisions :—

1. The COLUMN is in general divided into three parts—the *base*, the *shaft*, and the *capital*; except the Doric, which has no base. Columns are of three classes, called orders, and are intended to support the entablature.

1. The *base* is the lowest part of the column, and consists of a collection of mouldings, projecting equally all round, and encircling the bottom of the shaft.

2. The *shaft* is a frustrum of a cone, and is that plain or fluted part of the column, which is situate between the base and the capital.

3. The *capital* is the ornamental part, which crowns or finishes the upper part of a column, and differs in the various orders, as will be hereafter described. The capital is as useful

as it is ornamental, embellishing the superior extremity of the column, and at the same time preventing its angles from being fractured, and the architrave from being damaged.

II. The ENTABLATURE, or horizontal part of the order, which is supported by the column, is also composed of three principal parts or divisions; namely, the *architrave*, the *frieze*, and the *cornice*:—

1. The *architrave* is the undermost division of the entablature, and is composed of one or more *faciæ*, according to the order to which it belongs, and capped with a simple or compound moulding.

2. The *frieze* is the part comprised between the upper surface of the architrave, and the under side of the cornice: it is sometimes plain, and sometimes embellished with sculpture or inscriptions.

3. The *cornice* is that assemblage of mouldings, which crowns the entablature from the frieze upwards, and is divided into simple and compound mouldings, plain faces, &c. according to the order.

Having thus divided an order into its two grand divisions, the column and the entablature, and sub-divided the column into its base, its shaft, and its capital, and the entablature

into its architrave, its frieze, and its cornice, the next step will be to divide each of these primary subdivisions into its several component parts.

Every order is composed of these primary and divisional parts, which differ in each of the orders, as will presently be described.

I have before remarked that every column, except the Doric, has three parts—the base, the shaft, and the capital. The lowest or thickest part of the shaft is used by architects as the universal standard whence all the measures which regulate and determine heights and projections are taken; and this standard or scale must be known before any of the great architectural works of Stuart, Revett, the Dilettanti Society, Wilkins, Allason, &c. can be understood.

This universal architectural scale or standard is, and is *called*, a diameter; and, unlike the foot, inch, or yard, is as various as are diameters of columns. The diameter, of course, implies the chord of the circle, which forms the bottom of the column. Half of this diameter is called a module, and is also used as a primary standard of mensuration by some writers upon architecture. These measures of length are subdivided as follows—

namely, the diameter into sixty parts, and the module into thirty parts, each part being the same in length, and are called minutes; both manners of mensuration being the same under different denominations; as, for instance, one author says, a column, including base and capital, (which are always understood by the word column,) is six diameters twelve minutes high, while another would say of the same column and its measurement, that it is twelve modules twelve minutes, both meaning the self-same dimension. In the following lectures, and in all modern works, the diameter and its divisions comprise sixty minutes. These technicalities may appear dry to some, and unnecessary to others of my readers, but their mention is indispensable to the due understanding of what will follow.

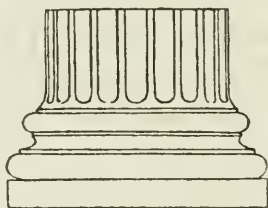
The bases of the various orders differ from each other in their essential parts, and even, among themselves in non-essentials, although not in character. The base of a column is composed of a series of mouldings encircling the bottom diameter according to its order.

The Doric, as I have before said, has no base. The Ionic differs in various specimens; but that which has been the most used for this order is called the Attic base, and is composed

of a cubical plinth, on which are a circular torus, a fillet, a scotia, and a compound moulding called an astragal, consisting of a small torus and two fillets, one above and the other below. A small cavetto or hollow connects the upper fillet, which is somewhat larger than a diameter, to the lower extremity of the shaft.

From this simple and beautiful base all the others appear to have emanated, as it contains the component members and leading characteristics of them all. It has also been more universally used than any of the others, having been borrowed from its Ionian proprietor by the Corinthian, and even occasionally by the Roman Doric. A fine instance of this adaptation of the Attic base to a Corinthian order may be found in the peristyle which encircles the tambour of the cupola of our St. Paul's cathedral. The exquisite taste of the illustrious architect of this cathedral led him to adopt it at that great height, on account of its parts being few and simple, in preference to the real Corinthian base, whose members are more numerous, smaller, and more complex; with its reeds, double scotias, and other reduplication of parts, which are not only characteristic of the order, but really beautiful, when used near to the eye. The saving also of expense,

in this instance, was no small recommendation ; for as Wren was limited in his pecuniary means, he was enabled to apply the saving to other portions of his work.



The lowest member of the base is the plinth, which is a parallelopipedon, showing on every face a perpendicular parallelogram. It is called by ancient writers *Zocolo* or *Plynthos*, being a cubical brick, or tablet, placed under the column, to prevent it from rotting when of wood, and from penetrating the ground when of stone.

The member next above the plinth is the large swelling circular moulding, called the torus, from the Greek *τορος*, a cable, which its form resembles ; or perhaps from the Latin *torus*, a bed or cushion, which its outline, apparently swelling by the superincumbent weight, may justify. Its proper situation is always immediately upon the plinth. The outline of the torus varies essentially in the Greek and Ro-

man systems of the orders. In the Roman it is always semicircular, and in the Grecian never of that common-place and tasteless outline, but always elliptical, parabolical, or other contour of a conic section. The toruses of the columnar bases of the temple of Minerva Polias, one of which is now at the British Museum, and those of the choragic monument of Lysicrates, delineated in Stuart's splendid work, the *Antiquities of Athens*, are fine examples of the elliptical form of this member.

The next member upwards is the fillet, which is a perpendicular, circular, plain face, continued all round the base, like an iron hoop, or fillet, intended to keep it from splitting; from which circumstance it undoubtedly took its name.

The next is a compound concave member, also encircling the base immediately upon the fillet, the upper edge of which forms the undermost of the scotia. This member is called scotia, from the Greek σκοτος, darkness, or shadow, which the upper part occasions over its deep and intense cavity. It is also called by some ancient writers *trochilus*, from the Greek τροχίλος, a rundle or pulley; to the hollow part of which, wherein the rope works, it bears

a striking resemblance. It is sometimes, by certain Italian and English authors, falsely and improperly called *cavetto*, which means simply a hollow, or an inverted ovolo, or quadrant; and some Italian writers call it *bastone*.

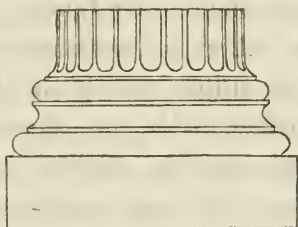
The next member, and that which completes the Attic base, is the astragal, so called from the Greek *αστραγαλος*, the bone or curvature of the heel; from which cause the French architects call it *talon*: terms correctly used when the member is thus applied; but when placed at the upper part of the shaft, under the capital, it is then called *colarino*, a collar or necking.

The investigation of the Attic base in detail may serve for all the others, for they are all founded upon it, and do not differ very essentially in principle from its component parts. The Tuscan base is mostly composed of a plinth, a torus, a fillet, and the universal connecting hollow to the shaft.

The base, called by the Italian and Anglo-Italian architects the Doric base, consists generally of a plinth, a torus, and an astragal, without its lower fillet, which is, in fact, the Attic deprived of its scotia and two of its fillets.

Some of the Greek, or true Ionic bases,

differ from the Attic in their arrangements, but are generally inferior where their difference is essential. The annexed is one of the best of the variations on the attic base.



The Corinthian base consists of a plinth, a torus, a fillet, then a large scotia, next a fillet, sometimes two beads, then a second and smaller scotia, and the concluding astragal, fillets, and usual hollow on the top to connect it with the shaft.

The Composite base differs so little from the Corinthian, where the Attic base is not used, that it is not worth detailing.

Having thus defined the lower division of the column—its base, our next step will be to the shaft. The shaft of a column is that columnar conical body which is situate between the base and the capital. In some examples it is plain, in others fluted, or divided into per-

pendicular circular channels, which are differently formed, and variously divided in the different orders. In the Doric, that is the true Doric, they are formed without intervening fillets, the rules for dividing which are to be found in most elementary books on architecture, and are called by workmen arris flutes. Such are Doric flutes, which should never be used to any other order, nor should any other kind of fluting ever be applied to the Doric order. These rules are sanctioned by first principles, and the examples of the Greeks, and violated by the Romans, the modern Italians, and the Anglo-Italian architects of the present day. In some examples of sterling authority, the shafts of the Doric order are fluted only two-thirds of their length from the top, and the remaining, or inferior third, left either circular, or the angles continued downwards, the circular part between each angle being made flat, and forming a polygonal figure of twenty sides.

In the purest examples of this order, one or more grooves or channels are cut of an equal depth from the surface, each groove being parallel to the capital of the column, as a sort of necking. The Romans and their before-

mentioned followers convert this, as in the example of the theatre of Marcellus, and the new chapel in Regent Street, to an ugly projecting necking, like the colarino of the Corinthian order.

The flutings of the Ionic and Corinthian shafts are differently executed. Between each flute there is a fillet or part of the shaft left uncut, of half its width, and the flutes are channeled in equal to half their width, forming semicircles on their plan. These are also often fluted only two-thirds of the way down, and then the lower third is carved to resemble a circular staff placed in the flutes and rounded on the top. They are divided in a similar manner to the Doric, the circumference of the shaft being divided into a certain number of equal parts, which vary in different specimens; one of these parts is given to a fillet, and two to a flute.

The next and concluding portion of the column is the capital, which differs, according to the order to which it belongs. The capital is the most striking part of an order, and to common observers is the portion by which they best judge the name of an order. In the pure, that is, the Greek system of classical architecture, every other part of an order bears its character

as completely as the capitals ; but in the Roman and modern systems, they are huddled, mixed, and perverted, in a manner destructive to good taste and correct classification.

In the earliest periods of the history of architecture columns were used without capitals, but necessity soon added the abacus or tablet, which covers the capital ; in which simple state of a shaft and tile it long continued, some examples of which may be found in Egyptian architecture, particularly in the ruins of Thebes. This was subsequently improved to a sort of bell-shaped capital, at first plain, but afterwards sculptured with hieroglyphicks, figures, foliage, &c. The fruit or flower of the Lotus, the sacred plant of the Egyptians, probably suggested this form originally, which was sometimes embellished with palm leaves, as in examples found at Esne. In certain temples at Amara, and in the island of Philæ, the capitals are formed of the head of Isis, the original type of the Ionic. Various other specimens of ancient capitals, more or less ornamented, are to be found in the works of Pococke, Norden, Savary, Denon, Belzoni, Montule, and other Egyptian travellers.

The capitals used in Persian architecture

are of three kinds, one of which is nearly half the height of the column, and resembles a plume of feathers, falling down at the top, in the middle of which rises another range of feathers, and from them a kind of non-descript animal. The others are composed of the anterior moieties of the fabulous unicorn, in the manner of the double and quadrifrontal heads of Janus of the Romans. Examples of these may also be found in the works of Niebuhr and Chardin. The capitals of the temple or pagoda in the island of Elephanta resemble a broad flat cushion somewhat depressed, or rather a double echinus, one turned towards the other, and separated by a fillet, as may be seen in the works of Hodges, Thomas Daniell, and other Indian travellers.

Capitals of columns are divided and classified according to their orders; in which there are many variations and deviations, which will be more particularly noticed hereafter, under their several and proper heads.

The Doric capital, as described by Vitruvius, Scamozzi, Palladio, Chambers, and other eminent masters of the Roman and Italian schools, although divided with much mechanical skill and accuracy, and possessing a certain share of comparative beauty, yet differs so much from

the genuine canons of the order that I shall omit noticing it for the present, and confine myself to the pure models of Grecian elegance and simplicity; for the order, misnamed Doric by these masters, would never have been acknowledged as a native of that clime in the days of architectural purity.

The capital of the Doric order agrees in character in all the ancient examples, although it differs in minor parts, which difference is specific, and does not detract from the generic characteristics of the order: therefore the following general description is applicable to all.

The Doric capital is divided into three principal parts: the abacus, the echinus, and the annulets. The abacus, from $\alpha\epsilon\alpha\xi$, a tablet or table, is the superior member or covering of the capital, and appertains to each of the three orders, but it assumes a different and characteristic form in each. In the Doric and Ionic the abacus is square in its plan, plain in the Doric, and moulded in the Ionic; and in the Corinthian each face is hollowed into a circular, and (with the exception of the example in the portico at Athens, called the Poëkile) cut off at the angles.

The abacus of the Doric capital is a paral-

lelopipedon, or unequal cube, varying from ten to twelve minutes, or about the sixth part of the bottom diameter, in height, in the best examples. Immediately under the abacus is the large eliptico-circular member called the echinus, from *εχινος*, a chestnut, the outline of which it resembles. The echinus, in the finest specimens of the order, is either elliptical or hyperbolical in its perpendicular outline, but never circular; and, with the annulets under it, is the same height as the abacus.

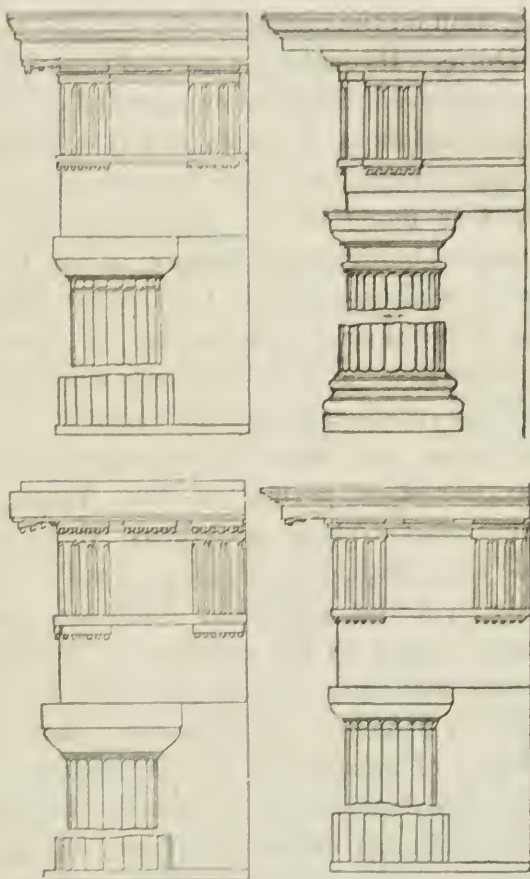
The annulets, as their name imports, are three rings, or circular fillets, under the echinus, falling off under each other perpendicularly, like an inverted flight of steps, and partaking of the general outline of the echinus in the arrangement of its angles.

In many examples, at about thirty minutes below the top of the abacus, is a channel sunk round the shaft, as if to determine the size of the capital, situated in the place of the Roman hypotrachelion, or necking, whether the shaft be fluted or plain.

In no instance is the superiority of the Grecian style of architecture over the Roman more apparent than when viewed comparatively in this order, which Aikin* calls “ the precious

* Essay on the Doric order, by Edmund Aikin, fo. Lond. 1810.

legacy bequeathed by the first-born and most favoured sons of taste to the admiration of succeeding ages," and the pseudoric of the Roman and Italian schools. To the beautiful and characteristic abacus of the true Doric the Romans have added the moulded cymatium and fillet on the top. For the chaste simplicity and elegant outline of the echinus they have substituted the clumsy and tasteless ovolo, which they even have often spoiled by carving. For the annulet they often substitute an astragal, or a bead and fillet. For the delicate and effective channelled hypotractrelion they bolster round the shaft the colarino of the Corinthian; and, to complete the absurdity, leaves have even been added in the part between the necking and the under moulding of the capital, which Palladio, oddly enough, calls the frieze of the capital. To its beautifully proportioned shaft they have added several diameters in height. For its conical outline they have substituted the swelling shaft, and for the shallow arris flutings of the original the semicircularly hollowed flutes and wide fillets of the other orders have not seldom been misapplied.



In the above cuts the Grecian Doric is contrasted with the Roman. Two other Grecian examples are annexed.

I must say a few words more before closing

this section on the characteristic echinus of the true Doric. Its contour is generally, as I have before observed, elliptical or hyperbolical, but, in many instances, it forms nearly a straight line, and even when it does not it is comparatively very flat. Besides making the leading and most characteristic feature of the Doric capital it is always used in the Grecian system for the superior or crown member of cornices and architraves, and is peculiarly suitable for mouldings receding from a flat surface; of the flatter forms are those of the capitals of the Doric tetrastyle portico of the Agora, or ancient market-place at Athens, the Doric temple at Corinth, and the temples at Pæstum, in Italy: yet the hyperbolic forms are more generally found in the capitals of Athenian buildings than any others. Of such are the temples of Minerva and Theseus, (fragments of which, of infinite use to the architectural student, are deposited in the British Museum,) and the columns of the Propylea, or grand entrance into the citadel at Athens; all of which cited specimens were built during the glorious administration of Pericles. One instance of the echinus being a perfectly straight line from the under side of the abacus to the

upper side of the annulets occurs, among others, in the portico of Philip, king of Macedon.

Thus we find the Doric capital to be composed of an abacus, an echinus, three annulets, and an hypotrachelion.

Among the best examples of this sublime and majestic order, which may be called the Grecian order, *par excellence*, are the remains of the Greek temple at Thoricus, in Corinthia; the temple of Apollo, at Delos; the temple of Theseus; the Parthenon; the Propylea; the Doric tetrastyle portico, at Athens; the temple of Minerva, on the Sunium promontory; the temple of Jupiter Nemæus, between Argos and Corinth; the temple at Selinus, and those of Juno and of Concord, at Agrigentum, in Sicily; that of Jupiter Panhellenius, in the island of Egina; and those at Pæstum, which will be comparatively examined hereafter.

For the best descriptions and delineations of this order I take leave to refer to Stuart's *Antiquities of Athens*; Aikin's *Essay on the Doric Order*;* Wilkins's *Antiquities of Magna Grecia*; Major's *Ruins of Pæstum*. The best

* See a Table of the Proportions of the Doric Order at the end of this Lecture.

executed specimens in this country are Mr. Harrison's grand entrance to Chester Castle, Mr. Smirke's portico of Covent Garden Theatre, and Mr. Tatham's entrance to Cleveland House, St. James's.

I shall now proceed to the investigation and description of the Ionic order. The Ionic capital is divided into two principal or leading features—the abacus and the volutes. The abacus is a right-angled parallelogram, nearly square on its plan, and moulded on its perpendicular sides, or edges, sometimes with a cymatium, sometimes with an echinus. The volutes are two spiral mouldings on each side of the front, perpendicular to the horizon, alike on two faces, and the other two profiles or sides alike in themselves, but differing from the front; the extremities of each are the same distance from the centre of the column. Each spiral, or volute, has the same number of volutions, or spirals, which are differently connected by mouldings, passing between and behind them round the shaft of the column.

One of the most beautiful examples of simple dignity found in this order, or perhaps in any other, is that of the small Ionic temple on the banks of the river Ilyssus, at Athens: correct adaptations and copies of which are to be

seen in Mr. Atkinson's portico of the Board of Control, Cannon-row, Westminster; the late Mr. Holland's colonnade before Carlton House; Mr. Dance's portico of the College of Surgeons, Lincoln's Inn Fields; and many other buildings of the metropolis.

The simplicity and breadth of parts, their judicious arrangement, the beautiful contour of the volutes and graceful curve of the hem hanging between, render the above one of the most beautiful and bold examples of the Ionic order. The grand proportion of the whole entablature, the massy and effective mouldings of the cornice, the spacious surface of the frieze, so well adapted for sculpture, and the plain architrave, which is not broken and subdivided into several *faciæ*, are considerations which recommend this example as one of the canons of the order.

Another fine and more embellished example of the Ionic order is taken from the beautiful temple of Minerva Polias, at Priene, in Ionia; the architect of which was Pytheus, who, requiring an enriched order, did not, like the Romans, corrupt the Doric with misplaced ornaments, but rejected it entirely, and composed this elegant specimen upon the pure elements of the ancient order. The small

projection of the cymatium, or upper moulding of the cornice, and its great height, is beautiful and well adapted to receive its ornaments, as it is less obscured by the shadow of the concave and convex parts of the moulding. The dentels are introduced in the bed-mould of the cornice with great propriety and effect, as their bold and singular projection relieves them completely from each other, and clears the obscure part of the entablature with an elegant play of minor light and shade in a low key. The architrave is well proportioned; but, having three faciæ instead of two, it encroaches too much upon the Corinthian.

The capital is an elegant and embellished variation of that from the Ilyssus; it is more enriched without destroying the harmony and elegance of its proportions, and the spirals of the volutes are elegantly and tastefully drawn. The eyes of the volute are sunk two and a half inches deep, probably for the purpose of affixing a festoon of real flowers, as was the custom of the Greeks on days of public festivity; which custom probably originated the stone-carved garlands which decorate the Ionic capitals used by Inigo Jones in the front of his chapel at Whitehall, Shaftesbury House, in Aldersgate-street, and other of his works in

Lincoln's Inn Fields. These festoons have been also introduced, by needy minds, in panels; and by others of still poorer invention, as festoons of drapery, which, in their moulded panels, look like imitations of dirty cloths hung out to dry from a Parisian garret window.

The hem, or border, of this capital, from volute to volute, with its delicate fillet resting on the grandly designed ovolo, connecting with a graceful curve the spirals of the volute, seems to keep them in their situations, and greatly conduces to the beauty of the capital. The richness and delicacy of the ornaments, and their bold relief, with the grand proportion and distribution of the parts and mouldings to each other, render the order of Minerva Polias one of the most striking and beautiful of the Ionics.*

* The best studies of this order are the remains of the Greco-Ionic buildings, and the most elegant capitals those of the temples of Minerva Polias, and Eretheus, at Athens, (some fine fragments of the entablature of one of the above are to be seen at the British Museum;) the temple formerly on the banks of the Ilyssus; that of Bacchus, at Teos; Minerva Polias, at Pryene; Apollo Dedymæus, near Miletus; and Fortuna Virilis, (at a very humble distance,) at Rome: all of which may be found delineated in Stuart's Antiquities of Athens; the Ionian antiquities, published by the Dilettanti Society of London; Desgodetz Antiquities; the works of Palladio, &c. &c.

Our next and last step in the description of the orders is to the Corinthian. The origin and reputed origin of this splendid order has been related before. It is the richest and most embellished, and is as it were the seal and completion of them all.

The capital consists of two annular rows of leaves, each leaf of the upper row growing between and behind those of the lower row, in such manner that a leaf of the upper row may be in the middle of each of the four faces of the capital. Between each space of the upper leaves spring stalks ending in volutes, two of which meet at each angle of the abacus, and two in the middle of each face of the capital, sometimes touching and sometimes interwoven with each other, as in the beautiful specimen from the temple of Jupiter Stator, at Rome, copied by Mr. Holland in the portico of Carlton Palace.

This order, though the most embellished, is yet the most simple and easy to use in either colonnades or porticos, having neither the difficulty of the triglyphs of the Doric nor the dissimilar faces of the Ionic, which require much skill to adapt in angle columns.

The principal examples of the Corinthian order now remaining in Italy and Greece do

not differ from each other so essentially in character as either the Doric or the Ionic.

The Corinthian order, as used in the Pantheon, at Rome, is, although rather plain, of beautiful proportions : it is chaste, correct, and an excellent model for imitation and study. Another very fine example is found in the three columns of the Campo Vaccino, at Rome, supposed to be the remains of the temple of Jupiter Stator. The elegance and beauty of this example, which is executed with much taste in the portico of Carlton House, particularly the capital, its graceful form, and the delicacy of its ornaments, render it one of the most complete examples now existing of the Corinthian order.

Another fine specimen of this order is that of the temple of Vesta, or the Sybil, at Tivoli, near Rome ; of which an imperfect delineation may be found in Piranisa. This order has also been transplanted to this country and executed in the north or new front of the Bank of England. Yet no less to be admired is the order of the Choragic monument of Lysicrates, near Athens, called by some travellers the lantern of Demosthenes ; a most faithful representation of which may be found in Stuart's Antiquities of Athens.

Having thus briefly described the three primary orders or elements of Grecian architecture; namely, the Doric, the Ionic, and the Corinthian, I shall now proceed to the second division of my subject, their several orders of Temples or Sacred Edifices, as laid down by Vitruvius, after the best examples of Grecian splendour existing in his days.

The orders of sacred buildings or temples of the Greeks are seven: 1st. the *Antis*; 2d. the *Prostyle*; 3d. the *Amphiprostyle*; 4th. the *Peripteral*; 5th. the *Dipteral*; 6th. the *Pseudo-Dipteral*; 7th. and last, the *Hypæthral*.

The order of temples called *Antis* is that wherein the end of the wall finishes in pilasters, or *antæ*, and has two columns between them; such is Inigo Jones's fine Tuscan portico of St. Paul's Church, Covent Garden.

2. The second order, called *Prostyle*, differs from the *Antis* by having columns added opposite the pilasters, or *antæ*, of each corner. The foregoing two orders have only porticos at one end.

3. The *Amphiprostyle* is the same as the *Prostyle*; but, as its name imports, with a *posticum*, or rear front, the same as the principal front.

4. The *Peripteral* has also porticos at both

ends, of six columns each, and eleven, counting the angle columns, at each side. It has, as its name shows, columns all round about the cell, as in the temple of Theseus, which, by the way, has two more columns in flank than the rules of Vitruvius prescribe.

5. The *Dipteral*, which Vitruvius places after the *Pseudo-Dipteral*, is octastyle, or eight-columned, like the portico of the Parthenon, but has a double row of columns all round the cell.

6. In the *Pseudo Dipteral*, or false dipteral, the porticos are octastyle, or eight-columned, in front, and on each side fifteen columns, counting those at the angles. The Parthenon is of this order of temples, but has seventeen columns on the sides; for the ancient architects of Greece did not servilely follow every dogmatical rule of the critics, yet in their variations never lost the true spirit of the original.

7. The *Hypæthral* order of temples is decastyle, or ten columned, both in front and rear: the other parts are distributed the same as the dipteral, but it has in its interior a double row of columns, one higher than the other, continued on all sides, and resembling an interior porch, and is called, from its situation, a peristyle. The middle part has no roof. A fine

example of this order of temples is to be found in that of Jupiter Olympus, at Athens. In Rome there is no example of it.

There are also circular temples, not classing under either of these orders; some of which are called *Monoptoral*, having one row of columns round about them, and no cell. Others are called *Peripteral*, having a cell, round which the columns are arranged, standing on a continued pedestal, called a *stylebate*, like the Temple of the Sybil at Tivoli, the choragic monument of Lysicrates, at Athens, and the Temple of Vesta, at Rome.

The third and last division of the elements of Grecian architecture is the manner of distributing the columns, which are all settled according to laws founded on good taste, reason, beauty, and strength. This is called *intercolumniating*, or arranging the distance of columns. Columns are placed at various distances from each other, not by chance or caprice, but according to rule; and the vacuity, or interval, between one column and another is called the *intercolumniation*. These intervals, or *intercolumniations*, differ in the different orders; and the style of porticos or colonnades is named from them. As thus:—

The first style or manner of *intercolumnia-*

tion is called *Pycnostyle*, or columns thickset. The space between each column, in this mode or style, is one diameter and a half. Of this style are the Parthenon and the Temple of Theseus.

The second is called *Systyle*, and has two diameters between the columns.

The third is named *Eustyle*, and is, according to Vitruvius, the most pleasing and eligible for general use; the space between the columns, or intercolumniation of the eustyle mode of distributing columns, is two diameters and a quarter. I here take leave to observe, that (as it strikes me) the most eligible mode of intercolumniating, or distributing the distances of columns in a design, is according to the specific dimensions of the building, and the number of columns to be used.

The fourth mode or style of intercolumniating a building is called *Diastyle*, and its width is three diameters.

The fifth is called *Areostyle*, or columns thinly set, and its width is four diameters.

Besides these orders or styles of intercolumniations, porticos are also named from the number of columns of which they are composed, and are called tetrastyle, hexastyle, octastyle, and decastyle, according as they

consist of four, six, eight, or ten columns in front.

Before leaving the purer architecture of Greece, a few moments must be devoted to the consideration of that of its colonies and distant parts.

The ancient temple at Corinth is an architectural monument of unknown antiquity. Its character is simple, pure, and bold, inferior to the three principal examples found at Athens, but still partaking of the purest characteristics of the order.

Among other curious and interesting ruins are the three ancient temples of Pæstum. One of them differs from every other temple in existence, having nine columns in the front, with a central range down the middle of the cell, the use of which appears to have been to support the roof.

The situation of these central columns has led to many conjectures as to what purpose this singular edifice had been applied. Paoli designates it as a basilica, in which conjecture he is followed by Delagardette; but Major observes, with more probability, that it does not present the form of a basilica, because its portico is on the outside, whereas, those described by Vitruvius were on the inside; nor

can he suppose it simply to have been a portico, as portions of the wall of the cell are still in existence. All its other parts, the odd number of columns in front excepted, and the above-mentioned central row of columns, bear every other mark and characteristic of a temple.

The centre or hypæthral temple is generally supposed to have been dedicated to Neptune, the tutelary divinity of Pæstum, or Posidoniæ. Wilkins thinks it to have been a temple of Jupiter, from the circumstance of its being hypæthral, which is a class of buildings that appears to have been generally confined to the temples of Jupiter. Its columns possess, in common with all its other parts, the Grecian character in the highest degree; and there is no doubt of its being coeval with the earliest migration of the Greeks to the south of Italy. These examples, with that of Corinth, possess the characteristic energy of the early style of the Greeks in an eminent degree, which may be discriminated from their later and more finished style by the following definition; namely, a shaft of great diminution and of low stature, a large and massy capital, with a very bold projection of the abacus, a

necking composed of three grooves, and an extremely massive entablature of nearly one half the height of the columns.

Mr. Forsyth, who visited this mysterious city with the feelings of a poet, says, that on entering its walls he felt all the religion of the place. "I stood," says this inspiring writer, "as on sacred ground. I stood amazed at the long obscurity of its mighty ruins." With regard to its great antiquity, he differs from other authors and antiquaries, and does not conclude that because the Pæstan Doric differs in all its proportions from that of the Parthenon, that the Pæstan temples are at all older than the Athenian. The proportions of an order, he justly observes, are but a matter of convention. They often vary in the same country, nay in the same edifice; and surely a Phidias, working in the metropolis of Grecian art, with its two best architects, and the Pentelican quarry at his command, might well produce more pure elegance than cotemporary, or even later, artists, who were confined to the ruder materials and taste of a remote colony.*

The author of the "Pleasures of Memory,"

* Forsyth's Italy, p. 312.

in some lines of characteristic energy, written at Pæstum, in March, 1815, says of these temples,

“ They stand between the mountains and the sea,
Awful memorials, but of whom we know not.

* * * * *

Time was they stood along the crowded street,
Temples of Gods! and on their ample steps
What various habits, various tongues, beset
The brazen gates, for prayer and sacrifice!
Time was perhaps, the third was sought for justice;
And here the accuser stood, and there the accused;
And here the judges sat, and heard, and judged;
All silent now! as in the ages past,
Trodden under foot and mingled dust with dust.”

They are indeed silent, yet speaking mentos of time and eternity. Of Pæstum and its violets, and its twice-blowing roses, what lover of poetry has not heard?—of those lovely flowers which

“ Now a Virgil, now an Ovid, sung;
Pæstum’s twice-blowing roses.”

These temples are said to have been discovered by accident so recently as about the middle of the last century. The most authentic accounts of them are to be found in Major’s Travels; and in Wilkins’s *Magna Græcia*, who has dilated, with a true architectural feeling, upon their drear ruins.

The next division of my subject is the analysis of the Etruscan school of architecture, which is, however, so lost in the lapse of ages, that it leaves but little room for architectural research.

The Etruscans are generally reported to have been equally distinguished in architecture as in the other arts of design. The Romans employed Etruscan architects in the building of the Capitol, of the temple of Jupiter, and many other large and splendid edifices, the examination of which will come more properly in the next Lecture. The walls of Etruscan cities were generally very lofty, and constructed with huge masses of masonry, remains of which have been discovered at Volaterra, Corlona, Fæsula, and other parts of ancient Etruria. The gates of their cities were of a simple construction and built with squared stones. The largest entrance into Volaterra is called the gate of Hercules, and is composed of a magnificent arch, built with nineteen large voussoirs. There are also others at the same place, and a smaller one of Etruscan architecture at Fæsula.

The earliest temples of Etruria were small in size, being, in many instances, not able to contain more than a statue of the divinity to

whom it was dedicated, and with sometimes an altar; but they increased in size as the people increased in number and in power. Vitruvius, who mentions having seen some of them at Rome, has left a description of them worth referring to as a matter of archæology. "The plan of the temple was a parallelogram divided into three cells, of which the centre one was the largest. Such was the middle cell of the temple of Jupiter at the capitol; the two others were dedicated to Juno and Minerva. The two ends of the temple were ornamented with pediments, which arose originally from necessity, and afterwards became so ornamental, that Cicero* says, if there were to be erected a capitol in heaven, where it never rains, it would be finished with pediments and a roof. On the top of the pediment were placed ornaments in bronze and terra cotta. The number of these temples was considerable, but there are now hardly any remains

* Capitolii fastigium illud, et ceterarum ædium, non venustas, sed necessitas ipsa fabricata est. Nam cum esset habitatio, quemadmodum ex utraque parte tecti aqua delaberetur, utilitatem templi, fastigii dignitas consequita est: ut, etiam si in cælo capitolium statueretur, ubi imber esse non posset, nullam sine fastigio dignitatem habiturum fuisse videretur. CICERO *de oratore*, lib. iii. cap. 46.

left. Next to the temples were their theatres, the Etruscans being great lovers of the drama, which formed even part of their worship. They built several large and magnificent theatres, of which there are now no remains, except at Adrea. The Etruscans are said also to have erected circuses; from which the Romans, under the government of kings, appeared to have borrowed them, but of which there are no remains. At Volaterra are to be seen the ruins of a fragment of Etruscan architecture, a public reservoir built under ground, twenty-four feet from the pavement to the crown of the arch, fifty-six feet long, and thirty-nine wide. Several remains of ancient Etruscan tombs have also been found, the greatest part of which are under ground. The interior of that near Crotona is in the form of a cross, the walls having several niches, destined probably for the reception of urns. This one is built with twenty-seven stones of an equal size, and very exactly jointed; but several consist of only five.

Near Perusium is another in very good preservation, built with large wrought stones. Others are built with a species of sand stone; such are those found near Clusium, Corneto or the ancient Tarquinium, Volaterra, and

Talaris ; the interiors of which are not arched, and are decorated with a variety of colours and figures. Of this description of building was the labyrinth of *Porsenna*, which Pliny describes, and which appears to have been the tomb of that monarch. It is a square building, thirty feet on each side, and fifty feet high. At each angle was a pyramid, and a fifth in the centre ; and upon the top of each pyramid was a bronze circle, and a kind of cap, to which bells were suspended by chains. This ancient monument is engraved in the memoirs of the academy of Cortona. The Etruscan modes of construction were both of brick and of stone, the latter a species of sand stone without cement. In their earliest days they formed their building stones of polygonal or of irregular figures, but arranged and shaped them so as to touch in every part. A wall of this construction* was discovered in the ruins of Cora near Veletri.

The architecture of the Etruscans is peculiarly distinguished by the invention of Atriæ, or fore-courts to the house, by arches, and by a species of column which has been adapted by the Roman and Italian architects as a dis-

* Millin.

tinct order, under the name of Tuscan, which will be discussed and analyzed in my next Lecture.

The Atriæ are said to have derived their name from the Etruscan colony, Adria, or Atria, where they were first used.

These courts were appropriated for the residence of slaves and servants, whom they were desirous to place at a distance from the apartments of the master, that he might not be disturbed by the noise of such a crowd. Their plan was simple, consisting of a parallelogram, surrounded by a portico, and supported by rough columns.

The Etruscan buildings in which arches are found are among the most ancient examples of their architecture; and several of them, but especially their subterraneous reservoirs, prove that their architects were well acquainted with the construction of the arch. The columns used by this people are distinguished by their form and proportion from those of any other nation of their time; profiting, as they did, from the Greeks, and yet obtaining the honours of the invention of an order from Vitruvius and his followers. Vitruvius gives a description of this order, and relates that in his time there were several Etruscan temples in Rome.

The other, or later portions of the history of Etruscan architecture, belong, more properly, to that of Rome, which will be the subject of the next and succeeding Lectures.

Having now, as far as the nature of this work has permitted, and without trespassing I hope too much upon the patience of the reader, explained and detailed the various elements of ancient architecture, down to the decadence of the pure Greek style, in the most popular and instructive manner which the subject and my abilities permitted, it remains with the student to make the application.

The orders and styles of architecture are but the *means*: to build with good sense, propriety, and taste, is the *end*.

Ancient examples, selected with judgement and pure taste; adapted, with the latitude of genius, to modern necessities; combined with the scientific inventions of modern construction; and perfected by study and practice; are the best schools of true architecture.

A TABLE OF THE PROPORTIONS OF THE DORIC ORDER OF ARCHITECTURE.

From Atkin's Essay on the Doric Order, published by the London Architectural Society.

Names of Examples.	Bottom Diameter.	Top Diameter.	Height of Column.	Architrave.	Frieze.	Cornice.	Intercolumniation.
Portico of the Agora, at Athens	60 min.	47 min.	6 Diam. $2\frac{1}{2}$ min.	40 min.	42 min.	21 min.	—
Temple of Minerva, at Sunium	60 min.	$45\frac{1}{2}$ min.	5 Diam. 54 min.	$48\frac{1}{2}$ min.	$48\frac{1}{2}$ min.	—	1 Diam. 28 min.
Temple of Jupiter Nemæus	60 min.	49 min.	6 Diam. 31 min.	38 $\frac{1}{2}$ min.	43 $\frac{1}{2}$ min.	—	—
Temple of Jupiter Panellenius	60 min.	$44\frac{1}{2}$ min.	5 Diam. 24 min.	51 $\frac{1}{2}$ min.	$51\frac{1}{2}$ min.	—	1 Diam. 41 min.
Temple of Theseus	60 min.	$46\frac{2}{3}$ min.	5 Diam. 43 min.	50 min.	$49\frac{1}{2}$ min.	—	1 Diam. $57\frac{1}{2}$ min.
Temple of Minerva, at Athens	60 min.	47 min.	5 Diam. $53\frac{1}{2}$ min.	43 min.	43 min.	32 min.	1 Diam. $17\frac{2}{3}$ min.
Temple at Corinth	60 min.	$44\frac{2}{3}$ min.	4 Diam. 4 min.	43 $\frac{1}{2}$ min.	—	—	1 Diam. 14 min.
Portico of Philip	60 min.	$49\frac{1}{2}$ min.	6 Diam. $52\frac{1}{2}$ min.	38 $\frac{1}{2}$ min.	$43\frac{1}{2}$ min.	$25\frac{1}{2}$ min.	2 Diam. $42\frac{2}{3}$ min.
Temple of Apollo	60 min.	$42\frac{1}{2}$ min.	6 Diam. $5\frac{1}{2}$ min.	49 $\frac{1}{2}$ min.	$49\frac{1}{2}$ min.	—	—
Temple of Minerva, at Syracuse	60 min.	46 min.	4 Diam. $24\frac{1}{2}$ min.	$44\frac{1}{2}$ min.	40 min.	—	—
Temple of Juna Lucina	60 min.	$45\frac{1}{2}$ min.	4 Diam. 42 min.	55 min.	45 min.	—	—
Temple of Concord	60 min.	46 min.	4 Diam. $45\frac{1}{2}$ min.	$46\frac{1}{2}$ min.	46 $\frac{1}{2}$ min.	25 min.	1 Diam. $5\frac{2}{3}$ min.
Pseudo-Dipteral Temple, at Præstum	60 min.	40 $\frac{1}{2}$ min.	4 Diam. 27 min.	50 min.	—	—	1 Diam. 15 min.
Hexastyle Temple, at Præstum	60 min.	43 min.	4 Diam. $47\frac{1}{4}$ min.	45 $\frac{1}{4}$ min.	$44\frac{1}{2}$ min.	$24\frac{1}{4}$ min.	1 Diam. 10 $\frac{1}{2}$ min.
Hypæthral Temple at Præstum	60 min.	$41\frac{1}{4}$ min.	4 Diam. 8 min.	42 $\frac{1}{2}$ min.	$40\frac{1}{2}$ min.	$21\frac{1}{2}$ min.	59 $\frac{1}{2}$ min. & 67 $\frac{1}{2}$ min.
Inner Peristyle of ditto	60 min.	43 min.	4 Diam. 13 $\frac{1}{2}$ min.	39 min.	—	—	1 Diam. 11 min.
Upper Columns of ditto, ditto	60 min.	44 $\frac{1}{2}$ min.	3 Diam. 50 min.	68 min.	—	—	1 Diam. $4\frac{1}{4}$ min.
Temple, at Selinus	60 min.	46 min.	4 Diam. $21\frac{1}{2}$ min.	46 $\frac{1}{2}$ min.	$44\frac{2}{3}$ min.	—	2 Diam. 49 min.
Temple of Jupiter, at Selinus	60 min.	$55\frac{1}{2}$ min.	4 Diam. 34 $\frac{1}{2}$ min.	52 min.	$44\frac{1}{2}$ min.	26 min.	1 Diam. 2 $\frac{1}{2}$ min.
Temple at Aegæta	60 min.	$44\frac{3}{4}$ min.	—	$49\frac{3}{4}$ min.	$52\frac{1}{2}$ min.	$40\frac{1}{4}$ min.	1 Diam. 11 min.
Theatre of Marcellus	60 min.	48 min.	7 Diam. $51\frac{1}{2}$ min.	30 min.	$45\frac{3}{4}$ min.	$37\frac{3}{4}$ min.	—

LECTURE V.

The Etruscan School of Architecture continued to the Period of the Conquest of Greece by the Romans, the FIRST EPOCH of Roman Architecture. Early Etruscan Buildings in Rome. Roman Architecture, from the Conquest of Greece to the beginning of the Reign of Augustus. SECOND EPOCH. From Augustus onwards. Characteristics of the Roman style and Buildings. The Roman System of the Orders defined and illustrated, and their Variations described. Their Buildings and Methods of constructing Temples, Triumphal Arches, Columns, &c. The elementary Principles of Roman Architecture elucidated, and its History carried on to the end of the Reign of Hadrian. The close of Roman greatness in Architecture.

LECTURE V.

THE architecture of the ancient Romans, under their first kings, has been already shown to have been derived from that of the Etruscans. This people, a colony from Greece, were antecedent to all the rest of the Italian peninsula in cultivating the arts, which they had practised even before the reputed time of Cadmus. All their arts were derived from Greece, by the migration of the Pelasgi. The architecture of Etruria should be considered more as a style, and as a school of art, than as a name given to the works of Etruscan artists. In its earliest period, that is before and about the time of Cadmus, it partook of the Egyptian and earliest Grecian styles; became afterwards refined through its connexion with Greece, and, finally, the immediate parent of the Roman.

Having, in my preceding Lectures, extolled the architecture of the Greeks above that of the Romans, in a manner beyond what the admirers of the Roman style may approve,

permit me to repeat, by way of explanation, that it was not in costliness or magnitude that the mighty genius of the Greeks developed itself so much as in *invention*, in *taste*, in *beauty*, in *refinement*, and in leaving to posterity the *best models for imitation*. These qualities have given this gifted people their deserved pre-eminence over all their imitators or competitors.

No remains of architecture or sculpture are to be found in Greece but what are canons of art, while Rome possesses more to corrupt the taste of the young architect than all its excellencies can counterbalance. It is, therefore, to the rules, the forms, the proportions, the taste of the former that the attention of the student should be perpetually recalled.

“Hear! how learn’d Greece her useful rules indites,
When to *repress* and when *indulge* our flights.”

POPE.

GREECE, even in its state of decay, should attract the student, during his travels through the elements of the art, as, in the decline of literature and fine taste, a city in the Asiatic desert did Longinus, who retired thither, as to an asylum whence he might contemplate the setting sun of Attic splendour.

The three essential and distinct qualities in architecture are *strength*, *grace*, and *richness*. The three orders of the Greeks possess all these requisites, and the five anomalous orders of the Romans possess no more. The aforesaid qualities are the landmarks, the boundaries, the north and south poles of the art. The Doric displays the first-mentioned quality of strength; the Ionic, the second, of grace; and the Corinthian, the third, of richness. The Corinthian is the *maximum*, uniting beautiful simplicity and florid decoration; while the Doric possesses pure simplicity, plainness, and robust strength; and the Ionic is the connecting link between the two.

Yet in these three simple elements what an endless variety! We no more need a new order in our architecture than a new letter in our alphabet. The architect of talent will as little think of bewildering himself in the search of a new order, as the illustrious discoverer of the safety-lamp, who now, for the interests of science, presides over the Royal Society, would of searching after the far-famed philosopher's stone.

Every style of architecture, to be complete, must possess these three elementary principles,

and no style requires more. That affectedly called by the “gnawers at the thrice-picked bare bone of antiquity,” the *English*, but which is better known by the untrue name of the *Gothic*, possesses them: and this style, I think, may easily be arranged, and a grammar formed of its romantic, but erratic elements, which, under the hand of a scientific architect, may arise into a pure and orthodox system. Supposing, for instance, now I am upon the subject—(which I will endeavour to improve upon in its proper place)—supposing, I say, that under the first class, or that of *strength*, we venture to put the Norman and the Saxon; under the second, or that of *grace*, the architecture of the period of Edward the Third, and its kind; and, under the third, or that of *richness*, we collect the styles called florid.

Not that I would, with that instance of *bathos* in architecture, Batty Langley, whose paragons of ugliness are of late reviving in our metropolis, make the five orders of Gothic architecture *complete*,* or attempt to speak of his Tuscan-Gothic (they are his own nomen-

* In his *not-enough-known* treatise on Gothic Architecture.

clature); his Doric-Gothic; his Ionic-Gothic; his Corinthian-Gothic; or, that acme of absurdity, his Composite-Gothic.

I have intruded this digression for the purpose of impressing more and more deeply upon the minds of the younger inquirers into the beauties of architecture, the superiority of the Grecian arrangement, or system of the orders, over that of the Romans, for simplicity, ease of remembrance, utility, and for giving freer scope to fancy, invention, and genius; and also that it can be applied as a system to other styles.

From Egypt, as I have endeavoured to prove in my former Lectures, architecture, with the rest of the arts, visited Greece; and, after the decline of the renowned states of that empire, settled for ages in Rome;—"a city," says the learned De Goguet, in his *Origine des Loix*,* "which seems to have been destined to swallow up and absorb all the kingdoms of the universe. Her feeble beginnings presaged no such degree of power as she afterwards attained. It was by steady policy and unshaken courage that Rome triumphed over all the

* Introduction to vol. iii.

obstacles that appeared to oppose her enlargement."

Greece, sunk into obscurity, and ruined by luxury and corruption, the deadly dry-rot of national greatness, paralysed by indolence and submission to her conquerors, gave up, supinely, her riches, her arts, her artists, to a people blessed with the rougher powers of industry and arms.

Far be it from me, however, to insinuate, by these observations, that *the cultivation of the arts* enervates a people; for history affords abundant proofs to the contrary, of which a very few instances will suffice.

When arts and literature were at their zenith in Athens, so were public virtue, strength of arms, and industry: all grew together and flourished abundantly side by side: they languished, they sickened, and they died together. So it was with other ancient nations, and so it will be with every people present and to come: and it is only inasmuch as literature and the fine arts are the seal, as it were, the crown, the *capital* of greatness, that the error has sprung up.

Before the introduction of pure taste, and the importation of Grecian art and artists into

Romé, we have the authority of all historians to show that its architecture was as rude as that of any other nation of antiquity. Their Etruscan neighbours led them to copy Greek originals, and one of their earliest kings, Tarquinius Priscus, was a native of Greece: hence the origin of the Roman style. Nor was it Grecian *architecture* alone that the Romans imitated; but their literature, their eloquence, their manners, and customs, were all borrowed from their illustrious predecessors. Vitruvius founded his code of architectural laws upon the Greeks; Virgil imitated Homer; Cicero, Demosthenes. The early Roman plays were translations from the Greek, and their latter ones imitations.

The natural tendency of the ancient Romans was to the grand and wonderful, the colossal, the showy, and even the prodigality of extravagance. Hence, the *temporary* theatre of Marcus Scaurus, erected while he was edile; which he adorned with three hundred and sixty marble columns, and three thousand bronze statues; and it was capable of containing eighty thousand persons. The shafts of the lower range of columns were thirty-eight feet long, and their weight was such that Scaurus was obliged to give security for the repara-

tion of the great sewers over which they were to pass, if they should be damaged by their conveyance: and this, be it remembered, was for an occasional temporary amusement.

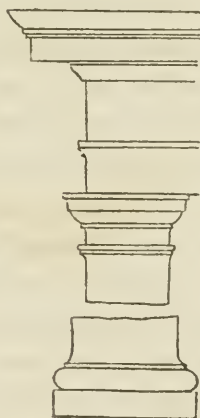
Such also in character was the wooden edifice erected by Curio, for the celebration of the funeral games in honour of his father; which was so contrived as to form, according to the nature of the exhibition, either a theatre or an amphitheatre. When to be used in the former way, the circular backs were placed against each other, thus becoming two separate theatres, so that the declamations, music, and applauding acclamations of the one, were not heard in the other. After the theatrical performances were concluded, the two edifices, turning on pivots, were rolled round by machinery, with all the audience within them, and the circle or amphitheatre was completed:—the pits, cleared of the populace, formed the arena. These accounts, however improbable they may appear, are quoted on the authority of the elder Pliny.*

The elements or constituent principles of Roman architecture, like those of the Grecian, are the orders; which, as we have seen, consist

* Plin. lib. xxxv. 15.

in the former code of five ; namely, the Tuscan, the Doric, the Ionic, the Corinthian, and the Composite.

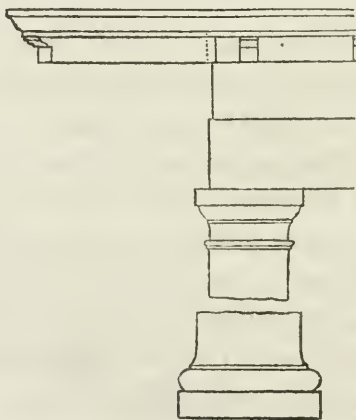
The *Tuscan order*, the first in rotation according to the Roman system, is, as may be perceived by inspection and comparing its



component elements, almost the same with the Doric, and is evidently derived from it. Having no complete example remaining of this order, all that we at present know of its use among the ancients is from the descriptions of Vitruvius, whose authority is the only rule for those who wish to use it ; yet the Doric, divested of a few mouldings, and its triglyphs, and of a diameter or so of its height, will answer every purpose for which the Tuscan can be re-

quired. As an historical evidence alone is it valuable. The purest specimen of this order in England, and perhaps in the world, is the church of St. Paul, Covent Garden, which some critics have cried up as a prodigy of art, while others have debased it to a merely decorated barn; but, as Sir Roger de Coverley says, "Much may be said on both sides." It is unique in itself, a fine specimen of the order, and reflects credit both on its architect and on his patron, the illustrious predecessor of the Duke of Bedford.

This order, as described by Vitruvius, and as practised by our able countryman, Inigo Jones, with its great projection of the crown members over the long cantalivers, as shown in the cut, may be applied with the greatest pro-



priety to market-places; the simplicity of its

elements and the extraordinary projection of its cornice rendering it peculiarly suitable to such purposes.

The column is seven diameters high; the base and capital are each half a diameter; the base is divided into two equal parts, one of which is given to the plinth, the other to the torus and fillet; the capital is divided into three equal parts, one of which is given to the neck of the capital, one to the ovolo and fillet, and the upper one to the abacus.

Palladio asserts that he found some ancient remains of this order in Italy, and gives an example restored from the fragments;* but it is so different from that described by Vitruvius that it is not so much a genuine Tuscan as a fancy order, founded upon a spoliation of the Doric.

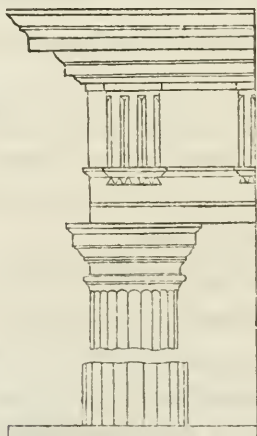
Scamozzi and other Italian architects have also tried their hands on a Tuscan order, but with little success. Their abortions may be seen in Evelyn's parallel.

The next Roman order is their Doric, which has been so altered and abused by various architects since the decline of Grecian purity, that some examples hardly appear to belong to the same order. For instance, compare the

* Palladio, vol. i. c. 14, pl. xii.

portico of Shoreditch church, by the late Mr. Dance, the finest example of the Roman Doric in England, with that of Covent Garden Theatre, the finest of the Greek we have, though grievously misapplied, and it will require no prophet to predict the result in the mind of any person of taste.

This order is by Palladio restored and compounded from all the best antique specimens found by him in Rome: his column is purer in style than any single ancient remain; and indeed has been elevated to the rank of a canon of the order. Let us, however, offer it to the test of criticism and try how it will bear that test. The bed moulding, (see cut,) or under

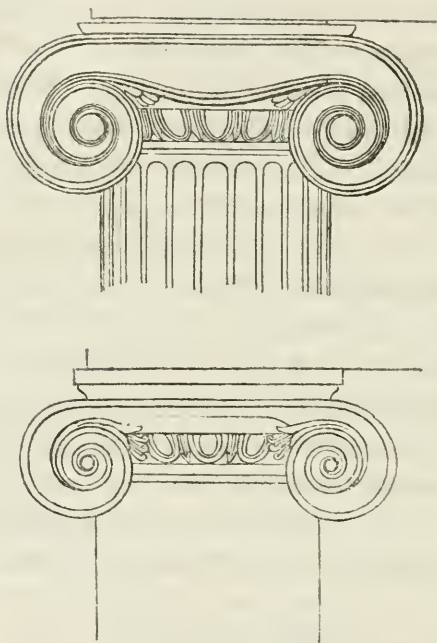


part of the cornice, is too complex and en-

riched for the simplicity and manly character of the order. The frieze is divided as he found the best remains in ancient Rome, and the triglyphs are consequently misdivided; the frieze has two faces, and the whole entablature too small a proportion of height. The capital is also overloaded with ornament, the abacus is destroyed by the addition of mouldings; the echinus is converted to a quadrant; the annulets are stuck out of sight; and the graceful channelling of the Greek hypotrachelion is omitted, to make room for a clumsy necking, which he calls *colarino*, belonging to any order *but* the Doric. He has also added a base to the shaft, and omitted the beautiful mutules which support the corona over every triglyph and metope of the Greek original. I need but add, “look on *this* picture and on *this*!”*

The next order in the Roman system is their Ionic, which differs almost as much in detail as the Doric, as may be seen in the comparative view of two of the best specimens, No. 1, from the Greek temple, near the river Ilyssus at Athens; and No. 2, from the Theatre of Marcellus, at Rome.

* The Doric of Palladio and that of the Parthenon, &c.—
See wood-cuts in page 207.



In its leading character, the volutes, however, it has not been so violated as the Doric.

The first specimen to which I beg leave to call your attention is from the temple of Fortuna Virilis at Rome, an excellent restoration of which, in all its details, may be found in Palladio's work on the ancient temples of Rome.

This temple, now used as the church of Santa Maria Egiziaca, stands near the Senatorian bridge. Its order of architecture is

Ionic, of temples Prostyle, and its intercolumniations Systyle.* The Roman antiquary, Vasi, supposes it to have been built by Servius Tullius VI. king of Rome, out of gratitude to Fortune, he having been born a slave. Palladio† relates a miracle concerning it; that all its interior being consumed by fire, the gilt wooden statue of the god *Manly Fortune* escaped undamaged, while every thing else was burnt. About the year A.D. 872 this ancient temple was converted into a church, and dedicated to the Virgin, under Pope John VIII. The great altar-picture, representing St. Mary of Egypt, is one of the finest works of Federigo Zuccherò; and it also contains a model of the Holy Sepulchre, at Jerusalem. In construction, it has half columns at the sides and a detached portico in front. Its order is undoubtedly the best to be found in Rome, and resembles the one of the Theatre of Marcellus in page 246, but will not bear comparison with the beautiful Greek original, whose name it usurps. Compare the two, and judge for yourselves. Look at the small size of the

* Refer to the former Lecture for explanation of these terms.

† Palladio, vol. ii. c. 13.

volute coming down scarcely below the sculptured echinus, which is as high as the first spiral of the volute, by which means the entire of the beautiful hem which hangs so tastefully over the Greek example is omitted. Its abacus is also altered from a simple to a compound moulding. Yet the builder of Waterloo Place, in front of the King's palace of Carlton House, with Mr. Holland's tasteful Greek screen in his eye, has rejected the orthodoxy of the one for the heresy of the other.

I will instance only one more example of this order after the manner of the Romans;—the very singular one of the Temple of Concord, which I much wonder has not yet been copied in *new* London. The cornice has mutules, or modillions, like the Doric; dentels like the Ionic; and three faciæ to the frieze like the Corinthian, thus stealing from all its neighbours. The capital has angular volutes, and an angular abacus, like the Corinthian, with a necking and a row of leaves like no order whatever.

The temple itself stands at the entrance of the Roman Forum,* near the arch of Sep-

* Pallod. vol. ii. c. xxx.

timius Severus, and is supposed to have been the Temple of Concord, built by Livia, and dedicated by Tiberius to Concord, in remembrance of the harmony subsisting between Livia and her husband Augustus. Palladio thinks it was built by Favius Camillus, in consequence of a vow.* It was burnt in the reign of Vitellius, and restored by the senate and people of Rome, according to an inscription† on the frieze. Of this edifice nothing is now standing but its portico, which consists of eight stupendous columns, twelve feet in circumference, and forty in height. The shafts are of oriental granite.

Such are the leading features or characteristics of the Roman Ionic; and it remains for the student to inquire from which source, Roman or Greek, he can draw the most graceful proportions of this beautiful and useful order. In the Roman specimens, their overloaded cornices, their ill-proportioned entablatures, their vulgar profiles, and the broken spiral lines of their volutes, render them, in my opinion, utterly unfit for models.

There is little in the Roman specimens of

* Pallad. vol. ii. c. xxx.

† S.P. Q.R. INCENDIS CONSUMPTUM RESTITUIT.

the Ionic to entitle it to notice, till the time of the compositions of Palladio, Scamozzi, Alberti, Serlio, De Lorme, and others of that school, which certainly are in better taste, as they approach more nearly to the legitimate standards of the order.

Our next step in the Roman system of the orders is to the Corinthian.

The origin and description of this splendid order were given in the preceding lecture on the Grecian system: and the principal examples now remaining in Italy and Greece do not differ so much as the other orders.

The Corinthian order, as exemplified in the portico of the building called the Pantheon, at Rome, although rather coy in ornament, is of beautiful proportions, is chaste, correct, and a good model for imitation. The entablature bears a just proportion to the column; the architrave, frieze, and cornice are in perfect harmony with each other; and the ornaments, though sparingly, are judiciously introduced. Sir Christopher Wren has used it with judgment in the lower order of the cathedral of St. Paul, and Mr. Hardwick in the portico of Mary-le-bone church, in the New Road; but I think both these architects might have carved the dentel faciæ of the bed mould into dentels,

without violating the character of their original; particularly the latter, whose portico, facing the north, receives only the declining rays of the sun, which, entering the bed mould, makes this member appear like a second corona, destroying the harmony of its light and shade, and producing spottiness rather than breadth. In St. Paul's the shade is deeper, and the defect not so conspicuous, particularly since the friendly soot of the city has formed an artificial shade over the portion of which I complain.

Of all the antique temples now remaining in Rome, the Pantheon is at once the most celebrated and most beautiful, and may be considered the master-piece of Roman architecture, whether we estimate it as when entire, or, as at present, stripped of all its statues and other ornaments. It is supposed to have been built by Marcus Agrippa, son-in-law of Octavius Augustus, in his third consulship before the Christian era, and dedicated to Mars and Jupiter the Avenger, in memory of the victory obtained by Augustus over Mark Anthony and Cleopatra; but I am inclined to think, with Palladio*, that the body of the temple was

* Pallad. v. ii. c. xx.

built in the time of the republic, and that Agrippa added the portico, and perhaps some other decorations, as the two pediments seem to prove. It was repaired by Septimius Severus and Caracalla. The interior was decorated with bronze ornaments in the panelling of the cupola, and contained the statues of all the Gods. The interior is no less fine and striking than the outside, and from its circular form is called by the Italians *Rotonda*, as, from containing statues of all the Gods, it was named by the ancients *Pantheon*, from ΠΑΝ ΘΕΟΣ. The diameter, exclusive of the large niches, is one hundred and thirty-two feet, being nearly thirty feet more than the cupola of St. Paul's, and the height from the pavement to the summit the same as the diameter. The thickness of the walls is nineteen feet, which is relieved by the beautiful Corinthian niches now used as chapels and altars.

This superb temple, "this most noble and perfect specimen of Roman art and magnificence that time has spared, or that the ancients could have wished* to transmit to posterity," after various repairs and changes, was given by the Emperor Phocas, in the year 609,†

* Eustace.

† Vasi.

to Pope Boniface IV. who converted it into a church, dedicated it to the Virgin and the Holy Martyrs of the earliest Christian ages, a quantity of whose relics he placed under the great altar, and named it *Santa Maria ad Martyres*. In 830 Gregory IV. dedicated it to *All the Saints*, whose festival he then instituted. It underwent many other repairs, and Alexander VII. reinstated the two columns, which were long wanting on the right side of the portico, made new capitals to them, and sculptured his arms (the Chigi) upon them. These columns were discovered near the piazza St. Luigi de Francesi, and are almost of the same proportion with the others.

Belonging to this church is a society of painters, sculptors, architects, and other persons of intellectual merit, who have raised in it several monuments to celebrated men. Here repose the remains of the inimitable Raffaello :

“ Ye radiant beams, the sacred spot illumine,
And sport, in mingled tints, o’er Raffaello’s tomb.”*

Among the busts are those of Raffaello ; Metastasio ; Pikler, the gem sculptor ; Bracci, the sculptor ; Venuti, the antiquary ; Rapini,

* Hawkins’ Oxford prize poem, 1813.

the architect; and other eminent artists and literati.

Among other fine examples of this order found in Rome, are the beautiful columns of the Campo Vaccino, supposed to be the remains of the temple of Jupiter Stator.* The capital and entablature of this temple have been well adapted by Mr. Holland to the portico of his Majesty's palace of Carlton House; and a complete set of moulds and casts have been recently brought to England by my friend Mr. Joseph Gwilt.

Another curious, bold, and elegant example must not be omitted, that of the temple of Vesta at Tivoli, the half of which is adapted to the round corner of the new buildings by Mr. Soane at the Bank of England; and complete casts have also been brought over by Mr. Gwilt, for his museum.

There only remains to be described one more of the orders of columns. The technical nature of this part of my subject has, I fear, almost exhausted your patience; but, like the description of the bones and muscles in anatomical science, it has been necessary to the developement of the art. The Composite

* Pallad, vol. ii. chap. xviii.

order is the fifth in the Roman system, and proves in itself the restless desire which this innovating and ambitious people had of altering and converting to their own use the materials, the arts, the science, and the customs of the countries which they vanquished.

This order is evidently derived from those of the Ionic and Corinthian, but can in no case be applied with superior effect to the latter. It was first used by the Romans in the triumphal arches which they erected to show to posterity their dominion over their conquered provinces. Of this order there are many existing remains ; but the best is that from the arch of Titus, fine casts of every part of which have recently arrived in this country, made by order of the same gentleman whose name I have before mentioned as possessing the casts from Tivoli and the Campo Vaccino.

This triumphal arch was erected by the senate and people of Rome, in honour of Titus, after his conquest of Jerusalem, and will be spoken of more fully in its proper place. The example here quoted may be selected as a very proper model of this order. Its appearance is grand and imposing, but differs only in its capi-

tal and greater height of shaft from the Corinthian.

I have thus endeavoured briefly to describe the constituent elements of the two leading or classical systems of civil architecture, the Grecian and the Roman ; and will proceed to an elucidation of the general characteristics of Roman architecture, as displayed in their aqueducts, their temples, their bridges, and their theatres ; of which Mr. Eustace says—“all the powers of architecture, of sculpture, and of painting, were employed to decorate their cities.” One of the principal temples erected by the ancient Romans was the Capitol, built on the Tarpeian or Capitoline hill, by Tarquin the Proud, in accomplishment of a vow made by his uncle, the elder Tarquin. The original edifice was formed in the year of the city, 670, rebuilt by Sylla, and dedicated five years afterwards. It was again destroyed by fire in the year A.D. 70, and was rebuilt by Vespasian, burned a third time, and re-edified by Domitian with great splendour. The buildings comprising the edifice called the capitol, consisted of three temples, consecrated severally to Jupiter, Juno, and Minerva. On the capitol were also the temples of Terminus,

Jupiter Feretrius, and the cottage of Romulus, which was long preserved with religious veneration.

Doubts have been entertained as to the situation of this building, and whether there were more than one. "Do you remember," asks Mr. Spence,* of Pope, "any thing of two capitoliums at Rome?" To which Pope answered, "yes, there certainly were two;" more readily than Holdsworth, a well known and celebrated antiquary of Roman affairs, who was present. "The former of these capitolis," continued the poet, "was built by Tarquinius Priscus, near the place where the Barberini palace stands, and was called *Capitolium vetus*; the other by the second Tarquin, on the hill, which was thence called the Capitoline hill.

The temple of all the Gods, called the Pantheon, and the temple of Concord, have been spoken of before; they erected, besides, those of Janus and of Romulus, of the sun and moon, Fortuna Virilis, Vesta, Minerva, Medica, Neptune, Antoninus and Faustina, Jupiter Stator, and the temple of Peace: the

* Spence's Anecdotes, Singer's edition, p. 204.

three magnificent arches now standing of the latter edifice, which have been finely adapted by Sir Christopher Wren in the choir of St. Paul's cathedral, give but a faint idea of its pristine splendour.

The temple of Fortuna Virilis and that of Vesta are fine remains of ancient Roman splendour. The circular ruin, now the church of Santa Maria del Sole, is supposed to have been the temple of Vesta. The external wall of the circular cell is entirely of Grecian marble, so finely joined together that the joints are hardly perceptible. The nineteen fluted columns of the Corinthian order are of Parian marble, and form a perystyle or portico of one hundred and fifty-six feet in circumference. One column, the whole of the entablature, and some of the sculptures are wanting; the diameter of the cell is twenty-six feet; that of the columns nearly three feet, and their height, including base and capital, thirty-two feet English measure.

Among the grander beauties of Rome were the Forums; and above all, in size, splendour, and architectural beauty, was the *Roman Forum*, which was the most renowned place in all the ancient city. It was here that the assemblies of the senate and people were held,

surrounded by the most splendid temples, basilicas, triumphal arches, porticos, and other public and private edifices, which were adorned by columns, statues, and various other embellishments.

“ But,” says Eustace, one of the most enlightened of our recent travellers, “ the glories of the Forum are now fled for ever ; its temples are fallen ; its sanctuaries have crumbled into dust ; its colonnades encumber its pavements now buried under their remains. The walls of the Rostra are stripped of their ornaments, and doomed to eternal silence : a few scattered porticos, and here and there an insulated column, standing in the midst of broken shafts, vast fragments of marble capitals, and cornices heaped together in masses, remind the traveller that the field which he now traverses was once the Roman Forum.” Few sadder or more faithful pictures have been drawn than this sublime view of the Roman Forum : it forcibly reminds one of Salvator’s picture of Caius Marius among the ruins of Carthage. This splendid structure is now converted into a beast-market, and called by the contemptible name of Campo Vaccino.

Of the other Forums, that of Trajan ranks first for splendour and magnificence. Of this

Forum, Ammianus Marcellinus relates, that when Constantius visited Rome he fixed his attention on the equestrian statue of Trajan, which stood in the centre of the Forum before the Basilica, and intimated his intention of erecting such a horse and such a statue of himself; when a Persian prince, who accompanied him, replied, “before you procure such a horse it would be as well that you should previously erect such a stable.” The Trajan column also forms one of the ornaments of this once splendid building.

Of the extent of ancient Roman splendour yet remaining, and of the grandeur of their ancient architecture, the following instance from the work before alluded to* may serve as an example:—

“A hall of an immense size was discovered about the beginning of the last century concealed under the ruins of its own massive roof. The pillars of *verde antico* that supported its vaults, the statues that ornamented its niches, and the rich marbles that formed its pavement, were found buried in rubbish, and were immediately carried away by the Farnesian family, the proprietors of the soil, to adorn their palaces

* Eustace's Classical Tour

and furnish their galleries.” “ This hall is now cleared of its incumbrances, and presents to the eye a vast length of naked walls, and an area covered with weeds. As we stood contemplating its extent and proportions, a fox started from an aperture, once a window, at one end, and crossing the open space scrambled up the ruins at the other and disappeared in the rubbish. This scene of desolation reminded me of Ossian’s beautiful description : ‘ The thistle shook there its lonely head ; the moss whistled to the gale ; the fox looked out from the windows ; the rank grass waved around his head,’ and almost seemed the accomplishment of that awful prediction, ‘ There the wild beasts of the desert shall lodge, and howling monsters shall fill the houses, and wolves shall howl to one another in their palaces, and dragons in their voluptuous pavilions.’ ”

The triumphal arches of the Romans may be reckoned among the architectural luxuries or superfluities of this magnificent people. Nothing which could tend to perpetuate the fame of the conquerors was omitted in the design. Some were constructed with two and others with three openings ; and the most magnificent were built on the triumphal way. On a triumph

being decreed, the senate received the conqueror at the Porta Capena, near the Tiber, which was the entrance to the city from the Appian way. A very brief description of them is all my limits will allow.

The *Arch of Augustus*, at Rimini, has but a single opening,* about thirty-three feet in width, crowned with a pediment, contrary to the usual practice. It is a beautiful specimen of construction, but is much mutilated.

That called the *Arch of the Goldsmiths*, at Rome, is a curious example: it is small in dimensions, has but a single aperture, is covered with a flat lintol, and is much embellished with sculpture.

The arches of Titus, at Rome, and of Trajan, at Benevento, bear a striking resemblance to each other. The former is of that Composite order which I have dilated upon in the preceding part of this Lecture, and is said to have been the first constructed of this order: it was erected for the triumph of Titus over Jerusalem, on which account no Jew will pass under it. The *bassi-relievi* represent, on one side, the ark and the golden candlesticks; on the other the

* Gwilt's *Notitia Architectonica Italiana*.

emperor in his quadriga. In the attic is represented the apotheosis of Titus, whence it is inferred that it was finished after his death.

The triumphal arch of *Gavicis*, at Verona, called "*Del Castel Vecchio*," no longer exists: I mention it, however, on account of Vitruvius having been charged by some with violating his own precepts in the construction of this arch; but its builder was Vitruvius *Cerdo*, not Vitruvius *Pollio*, the legislator of architecture.

The arches of Septimius Severus and of Constantine are with three openings. The latter is embellished with ornaments, shamelessly stripped from the arch of Trajan; and from their absurd application we are the more disgusted with the barbarism of the despoilers. The former is in fine preservation, and serves as a portico to the church of St. George, in Vellario.

Arches were among the constituent and peculiar elements of Roman architecture; the principal merit of which, indeed, was that of *construction*, a distinction in which the ancient Romans and modern Italians have never been surpassed; and I have, therefore, reserved my observations upon this great excellency in the more mechanical part of archi-

ecture for the present Lecture. This portion of my duties, I must premise, may appear heavy; but to those who honour me with their attention, more for such information as I can give than for mere amusement, no apology for this most necessary inquiry is needful.

The science of construction, or *Stereotomy*, as it is termed by the French, who have academies for studying it, is the art of executing buildings from drawings or models, pre-supposing the design to have no stereometrical error in itself. This subject demands the deepest attention, from its importance to the stability of public works. It is the knowledge of this science, added to that of design, which elevates the architect above the architectural draftsman. Without it he would become a mere decorator, who can only servilely copy others, or continually run the risk of designing impossibilities, and of surviving his own tottering fabrics. The knowledge of construction connects the *art* with the *science* of architecture; and, giving proper effect to their united energies, adds to their beauties and necessities the mathematical and arithmetical sciences, and the knowledge of calculation.

It was a want of this important knowledge in the Architect of the Ratchiffe Library, Ox-

ford, that obliged him to abandon the stone cupola which he had begun to construct over that building, and which caused dreadful fractures in the substructure, threatening final ruin, although encircled with buttresses almost colossal. He finally substituted the present wooden cupola, which evidently does not require those immense contreforts, originally destined to supply the stone cupola with that strength which a correct knowledge of the principles of construction could alone have furnished.

The same causes produced, though at a more distant period from its first erection, the tremendous fissures in the cupola of St. Peter's, at Rome, which have been recently admirably and scientifically remedied by the celebrated mechanician Zabaglia. This artist encircled the whole cupola, after the example of Sir Christopher Wren, at St. Paul's, with a stupendous iron chain, which should have been inserted on its first erection, as its construction was on such principles as evidently required it.

Even if the design should come more perfect from the architect than those just mentioned, yet a want of constructive knowledge in the workman would be no less decisive of insta-

bility. Ignorance of this in the workmen occasioned some of the arcades in the river front of Somerset House to fall on improperly striking the centres, and in consequence of the unfinished abutments having been left without temporary support. More of the dilapidations of modern buildings are occasioned by these deficiencies of knowledge, than by the slower operation of the insidious enemy—Time.

On the other hand, it is a well-grounded knowledge of this important branch of our art which elevates Sir Christopher Wren so much above his compeers and rivals. It is in this respect that his works so eminently excel. St. Paul's cathedral may perhaps strike some critics to be faulty in design; but, as a perfect piece of scientific *construction*, it stands without a rival. I speak with some confidence; for, by the advice of the late Mr. Milne, who was architectural conservator of this grand structure, I occupied myself considerably, during the space of three years, in measuring, delineating, and investigating its stereometrical qualities.* The church of St. Stephen, Walbrook, a work also of Sir Christopher Wren's, is no less admirable in this respect, al-

* Engraved and published in 1811.

though other beauties of a more apparent kind have raised it to a deservedly high rank among ecclesiastical edifices. The theatre at Oxford, also, is excellent in point of construction, although censurable as a work of taste. The same may be said of the incomparable spire of Bow church, Cheapside ; an architectural monster, as far as taste is concerned, but an inimitable specimen of scientific construction.

The Greeks and Romans were both admirable in this department of architecture. There are no false bearings in any of their stupendous edifices. In them we see no masonry depending on carpentry for its support ; no enormous cumbrous piers bowing down the arched lintol of a subjacent aperture ; no cupolas or arches vaulted over a threatened space, on tottering pinnacles, strutted up by flying buttresses or temporary shores, disgrace their scientific and well-digested works. In allusion to the nice balancing and excellent stereotomy of the Greeks, it has been said that the weight of a bird alighting on one end of an architrave would be felt at the other. It would be no miracle of strength in another Sampson to pull down on his devoted head many a modern temple.

It would be an invaluable acquisition could

we now obtain a journal or account of the methods used in constructing some of the most celebrated edifices of antiquity, or indeed of some of later times, where the principles of construction are neither so simple nor apparent as in the generality of the Greek temples. Such an account of his proceedings, of his difficulties, of their elucidation, correction and completion, from the pen of the architect of the Pantheon, at Rome; of the Cathedral of St. Peter, in the same city; of St. Paul's, London; the church of the Invalids, at Paris; Sta. Sofia, at Constantinople; or other equally celebrated and excellent buildings, would effect more for the attainment of canons of construction, than a thousand theoretical treatises unconnected with such just data and incontrovertible facts. The world lies under great obligations to the scientific Smeaton for his details of the Eddeystone Light-House.

Does the cupola of the Pantheon, at Rome, contain within its masonry any artificial links or ties of iron? If not, is that of St. Peter's, in the same city, erroneous in its construction from standing in need of their late insertion? or were those fractures occasioned by cutting away and weakening the substructure by an equally lamentable want of knowledge?

Are the chains which are inserted in the cone and inner dome of St. Paul's, London, essentially necessary to its present stability? or are they only wise preventives, in the too-certain event of decay, or the decomposition of the materials of the edifice? These are important questions and so essentially necessary are they to the perfection of architectural knowledge, that correct answers to them would be a public benefit and deserve the thanks of the whole world.

To illustrate the best modes of construction in all the various materials would occupy too great a space for a popular Lecture. To point out errors is easier and shorter; therefore I shall first mention a few, so prevalent as scarcely to be thought errors, from the many precedents that can be produced as authorities.

The Act of Parliament of the 14th George III. enacts many excellent regulations in construction that are often voluntarily adopted, even where the Act has no power. Yet many additions and amendments could easily be ingrafted on the present stock. One of the most formidable errors lies in its permitting brick or stone fronts to be erected on timber breastsomers and story-posts, which are in such imminent danger from accidents by fire,

that an expensive, new, and (otherwise) well-built house, would be inevitably destroyed through the defects only of this erroneous mode of construction. The remedy, too, is easy and obvious: brick, or stone arches, upon iron piers or standards, or bars of iron laid longitudinally as in the best mode of constructing kitchen fire-places, would be an infallible and unexpensive preventive. The materials of modern construction are timber, brick, stone, slate, tile, iron, &c.

Buildings constructed of timber are both frequent and useful; and construction in timber, or carpentry, is a most important study. Floors, roofs, partitions, and bridges, are the principal objects of this branch of construction.* From the dependance of Great Britain on foreign aid for the best fir timber, and its insufficiency in the case of fire, a more sparing use of it in building is not only desirable but necessary; therefore the following substitutes for construction in timber may be recommended. Basement stories can be arched: other floors, where that mode of construction is inapplicable, can be

* Mr. Tredgold's recently-published book on Carpentry is the best which has yet appeared, and leaves little to be desired by the student.

formed in the manner called bridged, which uses timber of much smaller dimensions, and affords the best means of applying Lord Stanhope's cheap and efficacious mode of preventing fires, called by workmen *pugging* and *sound-boarding*. Thus it appears that of all the modes of construction, that in timber is the least desirable.

Different nations of antiquity used different materials in construction; and their erections were the types and figures of the different orders. In those countries which abounded in forests, trunks of trees and their branches interwoven together served to construct the earliest dwellings; and when the first wants of the inhabitants were supplied, they were led to seek comfort and decoration; hence the origin of carpentry.

The inhabitants of mountainous countries sought for shelter in caverns; and when these were too few, or otherwise insufficient for their uses, they soon formed others, still imitating their prototype, the naturally-formed cavern. Others erected huts from rude stones and other excavated materials, still imitating the sheltering cavern. Industry, the hardy son of

want, and experience, soon taught them to square their materials, and more neatly fit their joints.

In those countries where the stone was extremely hard and difficult to work, the builders were led to use blocks of an amazing size and weight; and in other countries, where it was of a softer quality, smaller blocks, and more decorative workmanship; giving masonry and sculpture as helpmates to the science of construction.

Again, where stone and wood were scarce, the inhabitants applied to the ever-useful earth for relief. First, they used clods heaped together round a certain area, and brought to an apex. Improved knowledge next led them to form artificial cubes, now called bricks, which were first dried in the shade, and then used in construction. They afterwards discovered the art of burning them by fire, and rendering them by vitrification as hard and as durable as the most solid stone; and hence arose that other branch of construction called *bricklaying*. Thus sprung the three different branches of the science of construction,—timber, stone, and brick. Sometimes they are all three employed in the same build-

ing, sometimes only two, and occasionally, though but rarely, only one.

I know not whether it is that the principle of the grand and marvellous, which always pervades the infancy of architecture, arises from the contiguity man in his more uncivilized state bears to nature's awful works, his mind being filled with those vast impressions they never fail to communicate, or whether our forefathers aimed to astonish by magnitude, when they could not charm by beauty. Certain it is that many of their stupendous edifices were erected but as remembrances of some event, and were of an unemployable nature for dwellings, and that their private huts went but little beyond the supplying of the wants of nature, as may be conjectured from their fragile structures, which have scarcely left a vestige or

“ A wreck behind.”

Thus we perceive that the construction of most of the earliest buildings bears testimony to a love for, and affectation of, immensity of size, in their builders, and evinces remarkable facility in the execution of the most vast and magnificent enterprises.

According to ancient historians, the Egyp-

tians are reckoned to be the first people who constructed edifices of hewn stone; and, from scriptural evidence, were among the first who used bricks of burnt clay. This indefatigable people, who feared no difficulties, appear to have been actuated by a love of the vast and sublime beyond any other of the ancient world, scarcely excepting even the unknown excavators of Elephanta: aided by the immense quarries with which their country abounds, they set no limit to their love of magnitude, each succeeding building differing but in size from its predecessor.

Such were those eternal monuments of pride and ability—the pyramids; constructed, as has been supposed, for the burying-places of their kings. These edifices are perhaps the most ancient, and are certainly the most stupendous works ever constructed by the hands of men. The earliest of them were probably built upwards of a thousand years before the temple of Solomon, and about eight hundred years before the walls of Babylon.* The greater part have braved the devouring tooth of time nearly three thousand eight hundred years, and still are to

* Sol. Tem. 1015 B.C. vide Newton's Chronology.

this day almost entire, although built of a stone but moderately* hard. The blocks of stone used in the construction inside as well as outside of these architectural monsters are of a most prodigious size, placed on each other without cement, but so well jointed (say those who have had ocular demonstration of the fact) that the edge of a knife can scarcely be inserted between them.

From these specimens it appears that the science of construction consisted only in transporting and squaring stones of an extraordinary size, and that architectural merit was alone to be judged of from the magnitude of the work.

The immense size of many of the coverings of apertures, and whole roofs of temples formed of one entire stone, still extant in Egypt, would stagger belief, if the truth were not so well authenticated. One important fact is hereby proved; namely, that the principal of the arch was then unknown, or they certainly would not have transported the roof of the temple of Latona, at Butis, from the island of Philæ, as Herodotus testifies, a distance of nearly two hundred leagues. It was the most enormous

* Vide Dr. Pococke, Capt. Norden, and Mons. Denon.

block of stone ever moved by human power, and contained above one hundred and forty-four thousand cubic feet, weighing above twenty millions of pounds *avoirdupois*.

All modern mechanical powers must vanish before these wonderful exploits of ancient skill. Those of more recent date which have been most extolled are as nothing in the comparison. The moving and raising the obelisk in the front of St. Peter's at Rome, by Pope Sextus the Fifth, only equals its first erection in Egypt, and falls infinitely short of the power required to separate it from its solid bed in the quarry, together with the labour of bringing it to its present form. Yet what an affair of wonder and admiration was this work of Pope Sextus at the time; delineations of the machines, and of the manner of using them, were thought worthy of publication, and certainly do honour to the memory of that illustrious pontiff and his mechanist. Another modern marvel is the rock serving for the pedestal of the statue of Peter the Great, which was brought to the situation it now occupies by command of the late Empress Catharine; it scarcely weighs a seventh part so much as the before-cited Egyptian block, and was not brought above four leagues and a half from the

place where it was found to that whereon it now stands.

With all our resources, with all our mechanical and other sciences, we must, I fear, despair of equalling the means by which these great works were constructed.

It would be as useless as tedious to pursue the comparison further; deprived of a portion of their faculty of strength, we have advantages more than counterbalancing this deprivation. The invention of the arch, and the use of calcareous cements, render stone more fitting for ornament and sculpture, and afford more space for genius to operate. Our care, then, should be to excel in the departments of the art most suitable to our present purposes rather than idly to lament the ignorance of those powers which were used to remove blocks of stone, of a size such as these islands can never produce.

The Assyrians, who disputed the palm of antiquity with the Egyptians, were formidable rivals also in the glory of erecting stupendous buildings; but, as their country possessed no stone, they had recourse to brick, of which material the Temple of Belus and the walls of Babylon were constructed—works that are

reckoned among the seven wonders of the world. Historians inform us that they used bitumen, a sort of vegetable tar, to cement their bricks together; from which we may conclude, that they were unacquainted with the means of converting calcareous stones and earth into lime,—a most important discovery in the art of construction; for bitumen, when used as a cement, is subject to evaporation, from which calcareous cements, when properly indurated, are entirely free, as we know they have often acquired a hardness and solidity equal to that of the material cemented.

The period of the invention of calcareous cements is not precisely known; but was most probably posterior to the art of brick-making. Moulding earth, drying it in the sun, and burning it with fire, are more simple operations, and more likely to have been first discovered, than burning stones and then adding to them sand and water to make an artificial cement. Accident, the fruitful parent of our most brilliant discoveries, may have thrown this invention into the hands of man; the idea might have been given by a building consumed by fire, in which calcareous stones had been used, some of which had formed into a powder or

a paste by the operation of the water employed, but when facts are hidden conjecture may furnish many plausible causes.

It has already been said, that it is well known the Egyptians used no cement in the construction of their edifices. Diodorus Siculus relates that the Persians in their buildings followed the same mode after the conquest of Egypt, constructing them according to the manner of the Egyptians; and he farther adds, that the celebrated palace at Persepolis was thus constructed, and by an Egyptian architect.

The same taste for gigantic edifices, and probably for the same reasons, seems to have pervaded the earlier architecture of other countries. Mexico, Peru, Elephanta, and, I may add, England, in her Stonehenge, Avebury, &c. are among many proofs of the assertion: the antiquity of these structures is proved by the fact of their being executed without cement of stones well squared and exactly fitted.

The earliest mode of construction among the Greeks was with wood and tempered clay; yet their proportions were so exact and beautiful, that they have given rise to the orders or canons of architecture deduced from them.

They continued the imitations of their original wooden prototypes so closely, even after they began to build with marble, that it has been said that their tutelary goddess Minerva converted all their wooden temples into marble, by the waving of her spear, to render the edifices of her favourite people more durable and magnificent. The Greeks, favoured equally by nature as the Egyptians with a beautiful and enduring material, at least equalled them in the science of construction, and left them behind, at a fearful distance, in the art of architecture. Their latter buildings were constructed of enormous blocks of marble, squared, carved, and polished, with the utmost care, and were truly the triumphs of the art.

If the Egyptians have praise for patient industry in removing stupendous masses of stone, the Greeks deserve no less a share of panegyric for the manner by which Ctesiphon removed the columns of the celebrated temple of Diana, at Ephesus, the shaft of each column being sixty feet in height and of one single piece of marble. His son, Metagenes, signalized himself no less in removing and raising to their situations their immense architraves, which reached from one column to the other in an entire piece.

The Etruscans have left some specimens of very ancient methods of construction; and to them has been attributed the invention of building with small pieces of stone joined together by calcareous cements, because in their country are found the earliest examples of this method of construction. But it is to the Romans that the greatest praise is due for construction in this way; for to them must be attributed at least the earliest use, if not the invention, of the arch and the cupola, together with the building of walls and arches of small stones and bricks cemented together, of bridges, of aqueducts, and of sewers.

The earliest buildings of the Romans were without columns, and the greater part of their temples circular, and covered with cupolas; as those of Romulus, of Cybele, of Vesta, of the Sybils, of Mars, and others. Cossutius, who flourished about two hundred years before Christ, was the first Roman architect who introduced the Greek manner of building temples in Rome. Although the Romans had adopted Greek proportions of the orders, yet they still preserved their old methods of construction; they employed the orders, columns, pediments, and cornices merely as ornaments; whereas the Greeks used them as principal and neces-

sary parts. The architecture of Rome possesses, in its various and superabundant ramifications, heaps of affectations and conceits, solely arising from this error. The architecture of Greece, on the contrary, inculcates a noble simplicity; every ornament is so exactly in its place that it appears as if there necessarily, and that the work would be imperfect without it. Art is, with them, so concealed by easy simplicity, that although the eye is never surprised, or struck at first with wonder, as in more complex structures, it is always satisfied and never satiated, always delighted with the harmony of proportion and the simplicity of grandeur.

The Romans differed essentially from the Greeks in their manner of construction; the body and other principal parts of most of their temples, and even the columns themselves, were constructed of small stones and bricks connected together with an almost indissoluble cement, and cased on all sides with various marbles, and those impenetrable stuccoes which their important discoveries in the art of making calcareous cements had given them.

The order of pilasters and panels in the second story of the interior of the Pantheon is entirely encrusted in this manner with coloured

marbles opposed to each other without any projections, to which the Italians have given the name of *umbratile*. These incrustations they embellished with all that art and labour could bestow upon them. This manner of construction is certainly more simple and less costly than that of large blocks, especially where they have to be procured from a great distance; and, if the cement be good, it is in every respect equal, and in some respects superior. Many considerable edifices, including most of the gothic cathedrals of England and the Continent, together with the Temple of Peace, the Pantheon, the Palaces, Theatres, Circuses, Baths, and Aqueducts of Rome are thus built.

To architectural knowledge and taste, as a fine art, must constructive knowledge be added, or all we shall build will be worthless. Half-burnt bricks, half-rotten timber, stucco and mastic will never make London an “ eternal city;” and till the constructive errors of modern builders, I had almost said architects, be eradicated, like the dry rot or the leprosy, the more we build after the prevailing fashion of the day, the more food are we providing for the contempt of posterity.

LECTURE VI.

Roman Architecture continued from the Death of Hadrian to the removal of the Seat of Empire and the Arts to Constantinople. Their Aqueducts, Amphitheatres, Baths, and Bridges described and illustrated. The History of the Art continued till its Immersion in the Dark Ages, and its Revival in the Græco-Gothic, Saracenic, Moorish, the Style generally called GOTHIC, and the Italian or Modern Architecture. Characteristics in Style of the Age.

LECTURE VI.

THE Romans, in their architecture, possessed a greater variety of style and buildings than the Greeks. They had also a more extended dominion, more personal pride, and were more partial to show and magnificence than the graver and more philosophical Greeks. From these causes arose the number and grandeur* of their architectural achievements.

They also erected edifices to commemorate every great event:—hence much of their architecture must be classed as *monumental*. When the Romans† wished to perpetuate the remembrance of a singular event, they raised an altar and engraved thereon the particulars of the transaction. Tacitus relates, in his account of the public discussions which ensued in Rome after the death of Augustus, that the objectors to the honours paid to that Emperor complained‡ that “the honours due to the gods

* Murphy's Tacitus, vol. i. p. 399—notes.

† Ibid. p. 374—notes. ‡ Ibid. lib. i. sec. x.

were no longer sacred. Temples were built and edifices were erected to *him*:—a mortal man was adored, and priests and pontiffs were appointed to pay him impious homage.” The homage of temples was one that Augustus declined in his life; for Suetonius says,—“ Augustus, though he knew that temples were often raised in the provinces in honour of the proconsuls, allowed none to be raised to himself, unless they were, at the same time, dedicated to the Roman people. In the city, he absolutely refused all honours of that kind.” These facts prove that the raising and dedicating a temple was a common, nay, almost an every-day occurrence.

Tacitus, who deservedly ranks the highest among the historians of Greece or Rome, is perpetually adverting to the numerous architectural works of his public-spirited countrymen. But, alas! their character in taste was inferior both to their wealth and their vanity. They cultivated few things supremely but eloquence and the sword:—and oratory and successful war were the only steps to power and to greatness. Greece was fallen into a state of degeneracy. Point, antithesis, and conceit were the delight of vain preceptors, who filled the city of Rome, and held schools of declama-

tion, by Cicero called “*ludus impudentiæ*:”* and novelty, ornament, and bad taste crowded their monuments.

This great historian (Tacitus) says that, “towards the end of the year A.D. 16, A.U.C. 769, a triumphal arch was erected, near the temple of Saturn, in memory of the various eagles retaken under the conduct of Germanicus and the auspices of Tiberius.” Where, it was recently asked me by a foreigner of distinction in science, are the British temples in memory of the eagles captured at Waterloo? “Several other public monuments,” continues Tacitus, “were dedicated at the same time; a temple to Fortune, in the gardens on the banks of the Tiber, which Julius Cæsar had bequeathed to the Roman people; a chapel, sacred to the Julian family; and a statue of Augustus, in the suburbs called *Bovillæ*.†”

With such a people, architecture could not but flourish; and had they, like the Greeks, ennobled the profession of the architect as they did that of the orator, as fine a taste in the one country would doubtlessly have prevailed as in the other. Their very wars, as

* Murphy's Essay, p. 15.

† Tacitus, lib. ii. sec. 41.

we have seen, encouraged the arts. Statues and triumphal arches followed victory; and the spoils of the conquered, prisoners of war, with various *pictures* of battles, mountains, and rivers, were displayed with great pomp.

Another instance of the architectural grandeur of the Romans, on the authority of Suetonius,* is worth reciting:—Augustus, to perpetuate the glory of his victory at Actium, built the city of Nicopolis, near the bay; established quinquennial games; and, having enlarged an old temple of Apollo, adorned it with naval spoils, and dedicated it to Neptune and Mars.

Where are our memorials of our late splendid naval and military victories? Victories equal in generalship and personal valour to any in the page of history. Waterloo has not yet produced a single grand picture; nor has Nelson received any public national honours but a statue among the sculptures of St. Paul's Cathedral. NELSON,† a name equal to any in

* In Aug. 8, 18.

† There are, to be sure, Matthew Wyatt's fine groupe at Liverpool; the monumental column erected by his fellow-countymen at Yarmouth; and Westmacott's bronze statue at Birmingham, executed by subscription of the inhabitants: but I speak of *national* honours.

history; a man who lived and died in the service and for the good of his country. Had he been a Roman, the metropolis and provinces would have abounded with his triumphal arches and his statues. Germanicus, like Nelson, died in the service of his country, but not, like Nelson, in the hour of battle and of hard-earned victory, which always excites enthusiastic feelings. But how differently were they honoured. When the news of the death of Germanicus reached Rome,* “In a moment the passions of men knew no bounds; without waiting for an edict of the magistrates, or a decree of the senate, a cessation of all business took place; the courts of justice were deserted; houses were shut up; shrieks and groans burst out, and at intervals a deep and awful silence followed. A general mourning covered the face of the city.” So far the parallel runs equally with regard to these illustrious men:—Britain rivalled Rome in that anguish of the heart, which surpasses outward shew, at the death of her hero;—but it can be carried no farther. Our government is surely culpable in the want of instances of monumental gratitude to the great warriors,

* Tacitus, lib. ii. s. 83.

statesmen, and orators, who have embellished their days. Our Trafalgar monument, our Wellington trophy, our public mansion to the memory of the hero of the Nile, or palace to the hero of Waterloo, are "like tales told by an idiot, full of sound" and "signifying nothing;" while, on the death of Germanicus,* the senate met to decree honours to his memory. Friendship put itself to the stretch, and men of talents exhausted their invention. It was voted that the name of Germanicus should be inserted in the Salian hymn; that a curule chair, adorned with a civic crown, should be placed in the college of Augustan priests; that his statue, wrought in ivory, should be carried in the procession of the Circensian games; and that the vacancy made by his death in the list of flamens and augurs should be filled from the Julian family only. Triumphal arches were ordered to be erected at Rome, on the Rhine, and Mount Amanus, in Syria, with inscriptions setting forth the splendour of his actions, and in direct terms declaring that he died in the service of his country. At Antioch, where his remains were burnt, a mausoleum was ordered; and at

* Tac. lib. ii. s. 83.

Epidaphne, where he died, a tribunal in honour of his memory. Of the several statues, and the places where they were to be worshipped, "it would be difficult," says Tacitus, "to give a regular catalogue. It was farther proposed that a shield of pure gold, exceeding the ordinary size, should be dedicated to him in the place allotted to orators of distinguished eloquence." These marks of respect were not so much for the dead as for the living, and those who witnessed such grateful remembrances of heroic actions, acquired thereby an additional stimulus towards rivalling them. "Victory and Westminster Abbey" was a sentiment uppermost in the mind of Nelson, and they who are benefited by the victories of heroes, or the services of statesmen, should not be sparing of lasting monuments of gratitude, even if it be only with the view of exciting the aspirations of contemporaries.

The monumental column* erected to Nelson at Yarmouth is a Grecian Doric column, raised on a pedestal, and surmounted by a statue

* This memorial was erected by subscription of the Norfolk men to their fellow Norvicensian, after the design of Mr. Wilkins, the architect of Downing College, Cambridge.

of Britannia; being in the whole one hundred and forty-four feet high, overlooking the sea from a small eminence on a beach. It is thus beautifully described by a friend, in imitation of an ancient Greek poet, in the *Annals of the Fine Arts*:—

“Thy tomb, thus proudly o’er the ocean gazing,
Shall view each passing sail,—to deeds of might
Exhort the seamen,—and when fires, war-blazing,
Burst from embattled ships, shall stand spectator of the
fight.”

LEEDS.

To return :—The causeway called the Long Bridge, in Germany, was constructed in the days of Tacitus by Lucius Domitius; it stretched a great length between two prodigious marshes. The country round it was one vast fen, in some parts covered with a deep and slimy mud, in others with a tenacious heavy clay, intersected frequently with rapid torrents. But neither fens, nor torrents, nor hills, nor mountains, presented obstacles insurmountable by this energetic race. Temples, theatres, circuses, useful and ornamental structures, combining the magnificence of architecture, of sculpture, and of painting, decorated not only the capital but even the minor cities and towns of the most distant provinces (as their mighty

ruins testify) wherever the Roman name was known.

Our country exhibits them in every part, and in conquering they civilized our barbarian ancestors. A map of the Roman roads in England alone is a magnificent monument of their greatness. Roads and military ways, the very ruins of which excite astonishment, were carried from the Roman forum, the centre of their vast empire, to its utmost boundaries. In a similar manner they also constructed roads from the various metropolitan to the provincial towns of the countries which they subjugated. These connected the extremities of the empire with its heart, and linked all the nations composing it by connecting ties, which were cemented by the same laws, by similar governments, and by all the facilities of commodious intercourse and of frequent communication.

“ Their fortifications, their aqueducts, their theatres, their fountains, all their public works, bear the grave, solid, and majestic character of their language; and our modern labours, like our modern tongues, seem but constructed out of their fragments.”* Yet, with all these

* Guy Mannering, vol. ii. p. 7.

advantages, the Roman character was far from amiable, and their government from being beloved by its dependants. Plutarch, who was well acquainted with the antiquities and customs of the Romans, says that, "full of arms taken from barbarous nations, and of bloody spoils, and crowned as she was with trophies and other monuments of her triumphs, she afforded a most severe and awful spectacle. One might have styled her (to use an expression of Pindar) the temple of the frowning Mars." He also, in allusion to their natural want of taste in works of art, says, in his life of Marcellus, "Rome neither had nor knew any curiosities, but was a stranger to the charms of taste and elegance unto the time of Marcellus."*

The earliest architectural works of the Romans were, to a certain degree, grand, simple, and useful. Their great sewers, existing to this day, are wonders of mechanical† skill.

* Plut. in vita Marcelli.

† Tarquinius Priscus was the first who constructed these sewers for the reception of the waters from the *Velabrum* and the mounts. After traversing the city, they united at the *Forum Romanum*, whence, by means of two canals, the waters and filth were discharged into the Tiber; the largest canal was called *Cloaca Maxima*, the other *Cloaca Minor*.

Their theatres, amphitheatres, catacombs, aqueducts, bridges, baths, roads, palaces, triumphal arches, columns, villas, temples, forums, are generally surprising from immenseness of size. This produced an unnatural exaggeration in their style of architecture, which extended to other things. Their architecture gave to posterity the swoln Composite; their sculpture, the exaggerated style of the Gladiator; and their poetry, the hyperboles of Lucan and Statius. The Colosseum alone consumed more materials, and cost more money, than, perhaps, all the temples of Athens put together; and the Roman Forum would possibly have contained them all. It is to be lamented that the passion for architecture among the Greeks vented itself in public buildings alone. Their stern public spirit would not suffer one of their chief magistrates to boast of a structure worthy of the name of a *palace*. The Quarterly Review, of a few numbers back, ably characterizes the far-famed city of Athens, as possessing national edifices surpassingly magnificent, and private ones despicably mean; temples and statues in profusion, and no supply of one of

Tarquinius Superbus enlarged the great sewer; because, as Rome increased, it was not sufficient to contain so much water.—VASI.

the most necessary conveniences of common life—water: porticoes crowded with paintings, and a stream which the citizens were obliged daily to wade through for want of a bridge.* Exterior modesty, by the bye, was esteemed a primary virtue among the ancient Greeks.

A contrary feeling pervaded the Romans, even in the sternest days of their republic,† when every great man vied with another in the magnificence of his villa or palace. Pompey had a palace of superlative grandeur; the villa of Caius Marius, at Misenum, was so vast and grand that the republican spirit of his contemporaries began to feel offended; and yet, that of Lucullus, afterwards built on the same site, left the former a mere cabin in comparison.‡ Pliny informs us that there were, at one time, in Rome§ above an hundred palaces, the habitations of private individuals, equal in splendour to that of Lepidus, in its first state, which covered the ground occupied by an hundred ordinary houses.

Imperial Rome, we may be certain, was not behind republican Rome in this respect. Ju-

* Quarterly Review, No. 43, Art. IX.

† Bromley, vol. ii. p. 105

‡ Swinburne's *Two Sicilies*, vol. iii. p. 36.

§ Pliny, lib. xxxvi. c. 15.

lius Cæsar commenced a career of architectural magnificence in the provinces; and his nephew Augustus led the way among the Emperors; justly boasting that, having found Rome of brick he left it of marble. Oh, that some Augustus could arise to convert the half-bricks of London to marble! or that a British Minerva, in imitation of the Athenian, would, by her lance, change our compo and mastic into even decent stone.

Greece, as we have before seen, happily perfected the arts to which Egypt gave birth:—Rome, Prometheus-like, stole the fire of architecture from her, and laid her glories low, by pulling down and removing to Italy her statues, and columns, and treasures. The Romans hoped thus to confine the art to their own dominions, and to raise a name whereby to immortalize themselves and their posterity. Possessed of such a glorious prize, and being, at the same time, masters of so vast an empire, they selected and assembled the finest artists of the day; and, by unwearied perseverance, traced the most difficult paths of the Greeks in literature, art, and government.

Athens furnished them with rules, which they applied with an ambitious and aspiring mind in erecting the splendid buildings just enume-

rated. Marcellus, happy in victory, and possessing a cultivated mind, brought from Greece the materials and artists which he employed in erecting the magnificent theatre which is called by his name. Pompey the Great is reported by Tacitus to have built the first permanent Amphitheatre at Rome.

Among the most useful and at the same time stupendous works constructed by the Romans were their aqueducts. It must be owned that they possessed the art of embellishing the necessities of life and of rendering luxury subservient to utility beyond any other nation of ancient or modern times.

“ From blue hills,
Dim in the clouds, the radiant aqueducts
Turn their innumerable arches o'er
Their spacious desert.”

DYER.

An *aqueduct*, as its name imports, is a conveyance of any kind for the purpose of conducting water. Although any pipe or conduit is, properly speaking, an aqueduct, yet the word is generally applied to a canal, constructed on brick or stone arches, for conducting water through an irregular country to a city or town, with a regular necessary descent. Aqueducts may be constructed either below or above

ground, and are sometimes elevated on high piers and arches, forming a regular arcade.

Aqueducts are divided into two sorts or species, visible and subterranean. The first are such as are carried across plains or valleys, and are formed of piers and arches, like those of the Romans in various parts of Italy and France. Subterraneous aqueducts are such as are excavated through mountains, or carried under ground, as practised in modern times in various parts of England, France, and other countries.

Visible or architectural aqueducts are single, double, and treble, and are constructed of one, two, or three tiers of arches, one above the other. They are a species of construction quite unknown to the Greeks, and are among the noblest inventions of the Romans. Sextus Julius Frontinus, a Roman author of consular dignity, and sole director of aqueducts under the Emperor Nerva, wrote a treatise upon their construction, speaking of them as among the clearest evidences of the grandeur of the empire.

The first invention of aqueducts is attributed to Appius Claudius, (about the year of Rome, A. U. C. 441,) who by these means brought the water into the city, by a channel of eleven miles in length. But this was very inconsi-

derable when compared with those which were afterwards carried into Rome by various Emperors and other eminent persons. Several of these were cut through mountains and other difficult hindrances, for the distance of thirty, forty, and even sixty miles, and of such a width that, according to Procopius, a man might ride through them without the least difficulty. Many of their vaults and arches were one hundred and nine feet high above the level of the valley through which they passed.* The number of aqueducts in the time of Procopius, the year 530, A. U. C. he states to be fourteen.

The Roman aqueducts were named each from the place whence its waters were brought, or from the name of its founder, joined to the word *Aqua*, as *Aqua Marcia*, supposed to have been constructed by Ancus Marcius, *Aqua Alexandrina*, &c. The grandest and most celebrated is the *Aqua Claudia*, whose source is about eight miles to the south of the city, and which was constructed by Appius Claudius. It is partly above ground on arches, and partly subterraneous, being carried through the mountain near the Valerian way at Tivoli.

* Procopius de bello Goth. lib. i.

The Romans, inspired by a noble spirit of magnificence and improvement, constructed aqueducts in almost every place which fell under their dominion, as at Catanea, at Salona, at Smyrna, at Ephesus, at Alexandria Troas, at Evora, and at Athens. Among the most celebrated are those at Segovia and Mentz, and that at Nismes, a Roman province in the south of France, which is known by the name of the *Pont du Gard*.

The latter noble structure is situated three leagues north of Nismes, an ancient, large, and flourishing town in the department of Gard, in the south of France. It is supposed to have been erected by Agrippa, (although the letters A.E.A. would rather indicate Aquæductus Elii Adriani,) in order to convey to Nismes the water of the spring of Eure, which rises near Uzes. It is one hundred and sixty feet in height, and consists of three bridges, (if they may be so called,) reared one upon another, so as to unite two craggy mountains. The uppermost of these arcades has thirty-six arches of about fourteen feet wide and eighteen high, formed with huge blocks of stone, admirably put together without cement; the centre bridge, or arcade, on which this stands, has eleven, sixty feet wide and nearly seventy high; and

the lowest (under which runs the Gard, an inconsiderable but rapid river) has six arches of nearly the same dimensions. Louis XIV. when he repaired in 1609 the damages which this stupendous work had sustained by time, caused a real bridge, over which travellers now pass, to be constructed by the side of the lower range of arches.

In the "*Voyages en France et autres Pays*," by Racine, La Fontaine, and others, are the following descriptive lines, by Chappelle, whose travels with his friend De Bachaumont, who married the mother of the celebrated Madame de Lambert, are the grace of the first volume. "Nous ne pûmes, étant si proche de Nîmes, refuser à notre curiosité de nous détourner pour aller voir

Ces grands et fameux batimens
Du pont du Gard et des Arènes,
Qui nous restent pour monumens
Des magnifiques Romaines.

Ils sont plus entiers et plus sains
Que tant d'autres restes si rares,
Echappés aux brutales mains
De ce déluge de barbares,
Qui fut le fleau des humaines."

In Nîmes also are other celebrated and beautiful monuments of Roman antiquity,

affording more proofs, were more wanting, of the splendour of this extraordinary people, Nismes being but a provincial town. Among others are a public fountain, a mausoleum, and an amphitheatre. The amphitheatre is situated between the gates of St. Gilles and St. Antoine. Its shape is a complete elipsis, four hundred feet long, and three hundred and seven wide. It is divided, horizontally, into two stories of orders, is about sixty-four feet high, and supposed to have been erected by Antoninus Pius. The *Maison Quarrée*, or square house, as it is called by the French antiquaries, is a temple of the Corinthian order, in exquisite taste, proportion, and preservation. It was erected by the inhabitants of Nismes, in the year of Rome, A.U.C. 754, to the memory of Caius and Lucius, sons of Agrippa.

The aqueducts of modern times suffer in comparison with these which have been alluded to. The largest modern work of this description is the aqueduct of Caserta, called the *Aquedotto Carolino*, built by Luigi Vanvitelli. It conducts the water from a distance of nine leagues to the splendid palace (built also by the same architect) and gardens of the King of Naples. The aqueduct of Maintenon, in France, if it had been finished, would have been one

of the grandest modern efforts in this department of architecture, and a creditable rival of the ancients. It is already seven thousand fathoms long, and contains two hundred and forty-two arcades.

Among other architectural works of the ancient Romans are their bridges, of which most serviceable constructions they are not the earliest builders on record.

Their aqueducts, amphitheatres, triumphal arches, and baths, are exclusively their own; but other and more ancient nations dispute the palm of superiority for bridges with the Romans. Herodotus mentions one built by the Queen Nicotris over the Euphrates, at Babylon, which, according to Diodorus Siculus, was five furlongs in length.

In comparison with the Greeks, indeed, the Romans have the precedence; but, with the exception of the bridge of Trajan over the Danube, they must yield, in size of arches and other essentials of Pontine architecture, to the moderns. The Romans are not celebrated for any extraordinary span in the construction of their bridge-arches, which seldom exceeded sixty or seventy feet; only half of those of our Waterloo Bridge. The form of their arches was the most simple of all curves, being either

that of a semicircle, or a large segment; solid piers, at least a fifth, often a fourth, and sometimes a third of the aperture, support them. The greater part of their bridges were used as basements to support trophies, colossal figures, heroic or rostral columns, or triumphal arches. Such was the triumphal bridge of Ælius, at Rome, and such was the bridge of Augustus, near Rimini.

The bridges of ancient Rome were eight in number. The earliest built was that called *Sublicius*, from being constructed of wood. It was situated at the foot of the Aventine hill, united the valley at the bottom of the Janiculum to the Aventine, and was the same bridge that was defended with so much courage by Heratius Cocles. It was rebuilt of stone by Emilius Lepidus, from whom it took the name of *Pons Emilianus*, the Emilian Bridge. Tiberius repaired it, and afterwards, having gone to ruin, it was rebuilt by Antoninus Pius, of marble, whence it was called *Pons Marmoreatus*: at present there are hardly any remains of it.

Another of the celebrated bridges of ancient Rome is the Triumphal Bridge, which is called *Pons Vaticanus*, and leads from the Campus Martius to the Vatican. Over this

bridge, the generals who had obtained honours for victories gained in Spain and Gaul were accustomed to make their triumphal entries into the city.

The Senatorial Bridge was between the Forum and the Janiculum hill, and was so named because the solemn processions or entrances of the senate passed over it. The piers were built by Marcus Fulvius, and the arches were turned during the censorship of Publius Scipio and S. Mumunis. This bridge is now called by the name of Santa Maria, but is nearly in ruins. The other bridges over the Tiber are numerous, but descriptions of them may be found in any of the accounts of ancient Rome.

We must not omit mentioning the celebrated bridge built by Trajan over the Danube to facilitate his irruptions into Dacia. According to the descriptions of Dio Cassius it had twenty piers, which, without reckoning the foundations, were one hundred and fifty feet high, and sixty wide, united by arches one hundred and seventy feet in span, which are fifty feet wider than those of the Waterloo Bridge. Paulus Jovius, Count Manigli, and other able antiquaries, have written on this celebrated structure, which, however, did not exist for any great length of time. Hadrian caused it to be

demolished; and when he unjustifiably put Apollodorus, its architect, to death, he asserted, among other reasons, that the bridge had facilitated the irruptions of the barbarians into the Roman territory. But the real cause is better understood, upon the authority of Dio Cassius, to have been as follows:—

In a conversation which took place between the Emperor Trajan and his architect, Apollodorus, Hadrian was present, and, as an amateur, offered his opinion upon the subject; Apollodorus turned round to him, and, with an imprudent bluntness, pardonable, however, in an eminent professor to a superficial amateur, told him to go and paint his *Pompions*, a picture upon which Hadrian was at that time employed, and of which he was very proud. Hadrian concealed his displeasure, not only during the life of Trajan, but for some time after his own succession to the empire, availing himself of the talents of Apollodorus in some of the earliest works of his reign. But the offence was neither forgotten nor forgiven; its punishment being only suspended till he could find a Roman architect capable of executing his works. On finding Detrianus fit for his purpose he banished Apollodorus. Some time afterwards the ill-fated architect was consulted

by the emperor upon a design of his own for a temple of Venus, which he expected, from its excellencies, would have mortified the vanity of the sturdy old Grecian. On seeing it, the architect said at once that the temple was too scanty and too low ; and that the statues, although they were sitting, were too high ; for, if they should attempt to rise, they would knock off the flimsy roof with their heads.

The ridicule was more insupportable than the reproof ; and on the same year which saw that temple of Venus dedicated, (the one hundred and thirty-sixth year of the Christian æra,) was the great Apollodorus made a sacrifice to his love of truth. The bridge of Trajan, over the Danube, so wantonly destroyed by Hadrian, was one of the greatest works of this eminent architect.

The bridge of Alcantara, over the Tagus, is mentioned as one of the most beautiful remains of Roman splendour. From an inscription we are informed that it was the work of a Roman governor of the country, in honour of the Emperor Trajan. This great monument of architectural grandeur is six hundred and seventy feet in length, formed of six arches, and two hundred feet high from the surface of the water.

It is impossible even to enumerate, in the course of these Lectures, all the great works that honour the Roman name: but we must not omit their amphitheatres. An amphitheatre, according to the Roman definition, is a building of a circular or oval form, having its area encompassed by rows of seats, one above the other, that the spectators, sitting all round, may see what passes in the area, arena, or pit. The word, as its etymon imports, means a building formed of two theatres, each part facing the other. The centre was called the *arena*, from the sand which was strewed over its surface to absorb the blood of the combatants. In the arena were presented or performed the different sorts of games, shows, or combats, with which the Roman Emperors were wont to amuse their people, particularly combats of gladiators and wild beasts. The nature of these contests obliging the combatants occasionally to fly and pursue the architects were led to use an elliptical form. Round the arena were vaults, called *caviæ*, or *carceræ*, in which were confined the wild beasts appointed for these bloody exhibitions. Immediately over these vaults, or dens, was a peristyle, or portico of columns, called the *podium*, in which

the emperor, the senators, and other distinguished personages were accommodated.

Above and around this portico, or gallery, were rows of benches as high as the upper part of the walls, from every part of which the entire arena might be seen. The avenues and passages by which this public part was entered were called *vomitariæ*. The lowest rows of these public seats were appropriated to the highest classes of the citizens, and those above them, progressively, for the inferior orders of the people. The whole building was unroofed; the exterior face of the building, as in the Colosseum, was divided into several stories, ornamented by arcades, columns of pilasters, and oftentimes with niches and statues. They were calculated to hold from thirty to sixty thousand persons. Amphitheatres are buildings exclusively Roman; the Greeks never cultivating the barbarous exhibitions performed in them. Ancient writers have said but little on their construction; Vitruvius mentions them, but not in detail. The first amphitheatre on record is that which was erected by *Caius Scribonius Curio* in the celebrations which he gave the people on the occasion of his father's obsequies. He determined to surpass all others, if not by mag-

nificence, which his fortune would not allow, at least by novelty. With this intention, therefore, he constructed those two theatres, back to back, alluded to in a former part of this work, which, after the theatrical representations were closed, turned round, with the spectators within them, leaving the stages and scenery behind, and formed an amphitheatre, in which he again gratified the people with gladiatorial combats.*

Pliny gives an account of these moveable amphitheatres, which has somewhat puzzled the laborious antiquary, Count Caylus; but of which M. Weinbrenner, a German architect, has given a very satisfactory explanation in a memoir translated into French by M. C. Winckler, and published in the *Magazin Encyclopedique*.

In the first ages of the Roman republic, the amphitheatres were only temporary buildings composed of wood, which, according to Pliny, sometimes fell down with great destruction of lives. Their next mode was to construct them for a permanency, but still of timber. They were mostly erected in the Campus Martius, or some spacious place

* Casalius de Urb. Rom. et imp. splen. lib. xxxvi. cap. 15.

without the city. When Julius Cæsar performed the grand ceremony of the inauguration of his new forum, and the temple of Venus, which he built and dedicated, he gave the people, among other public shows, gladiatorial combats, for which he constructed an edifice of a circular form, with seats all round the arena; this still was of timber, and demolished at the end of the games. From these temporary wooden structures were derived the permanent and magnificent ones of later times.

The first amphitheatre of stone was built in the reign of Augustus Cæsar, by Statilius Taurus, in the Campus Martius. A portion of this building must have been of timber, for it was partly consumed by fire in the reign of Nero. The celebrated palace of Monte Citorio, built by Bernini in 1650, is erected on its ruins, and with some of its materials.

Caligula afterwards proposed erecting a noble amphitheatre of stone, but neither he nor his successors, Claudius and Nero, all lovers of gladiatorial display, ever completed the design. Nero erected one of timber for temporary purposes, in which, as Pliny relates, was an immense beam, or girder, one hundred and twenty feet in length, and two feet in thick-

ness. Tiberius is said to have brought this fine piece of timber from Rhætia to Rome, for the purpose of being used in a naumachia; and it was preserved as a national curiosity till it was thus employed by Nero.

At this period the Romans also erected amphitheatres, and introduced the spectacles commonly exhibited therein, in their principal provinces.

The Colossenm, or, as it was formerly called, the *Flavian* amphitheatre, was the most celebrated structure of this description; but it is now, with centuries on its head, fallen into a heap of ruins.

This stupendous edifice,

“ Which in its public shows unpeopled Rome,
And held, uncrowded, nations in its womb,”—

was known to the Romans by the name of *the* Amphitheatre, by way of eminence, and is called *Colosseum*, from its magnitude. It was erected by the Emperor Flavius Vespasian, in the year A.D. 72, after his return from his wars against the Jews, in the place where Nero's lakes and gardens had been, which is almost in the middle of ancient Rome. It is said to have been finished in five years; to have cost ten millions of crowns; and to have employed twelve thousand Jewish captives. Titus com-

pletely finished it, and solemnly dedicated it to his father.—The dedication of a theatre was celebrated by a drama; of a circus by a chariot race; of a naumachia by naval combats; and of an amphitheatre by gladiatorial combats and the hunting of wild beasts. It is related that, on the dedication day of this superb edifice, Titus had five thousand animals of various species brought here, which were all killed.

This building is almost entirely composed of large pieces of travertine marble, and is raised on two bases, on which the exterior arches rest; the whole structure was surrounded by three rows of arches raised one above the other, intermixed with half columns of the Doric, Ionic, and Corinthian orders. The form of this vast edifice is elliptical; the exterior circumference one thousand six hundred and forty-one feet, and the height one hundred and fifty-seven.

The greater part of this, the most wonderful monument of ancient Rome, has been injured by the united inroads of time, of earthquakes, and of the rapacity of man. Its mass of materials has served as a quarry for the Chancery, the Venetian, and the Farnese palaces.

Among the insulated or triumphal columns

of ancient Rome is that of the Emperor Phocas, near the Temple of Concord. It is of Greek marble, fluted, and of the Corinthian order, four feet diameter, and fifty-four high, including the pedestal. Another worthy of notice is that of Marcus Aurelius, erected by the Roman senate in honour of that emperor, for his victories over the Marcomans. Aurelius afterwards dedicated it to his father-in-law, Antoninus Pius, as is expressed on the pedestal; hence it is mostly called the column of Antoninus. It is of the Doric order, eleven feet six inches in diameter, and one hundred and forty-eight feet high.

The loftiest, however, in Rome is

“ Trajan’s column, tall,
From whose low base the sculptures wind aloft,
And lead, through various toils, up the rough steep,
Its hero to the skies.”*

This column is one of the most celebrated monuments of antiquity, and has endured the stormy waste of time upwards of seventeen centuries. The column at Alexandria, commonly called Pompey’s Pillar, is about ninety-five feet in height; Trajan’s, including the base

* Dyer.

and statue, one hundred and thirty-two; and the Monument, near London Bridge, including the base and vase of flames, two hundred and two. Trajan's column was erected in the middle of his forum, and dedicated to him by the senate and people of Rome for his victory over the Dacians, as the inscription on the pedestal shows. It is of the Doric order, composed of thirty-four pieces (only) of Grecian marble, joined with bronze cramps. This column, for beauty of sculpture, and for simplicity and dexterity of construction, is deservedly reckoned the finest in the world.

The baths of the Romans were on a similar scale of grandeur, and surpass every building of the kind before or since. My necessary limits will scarcely permit me to do more than allude to them, and to refer the investigating inquirer to the works of Palladio, and of our ingenious countryman Cameron, on the baths of the ancients, as well as to Ammianus Marcellinus, who reports that some of his time were as large (they are his own words) as cities, and that thousands could bathe at one time.

To afford my readers an idea of the extent of Roman magnificence I will give a brief description of the celebrated edifice of Hadrian, at Tivoli, near Rome, known to anti-

quaries by the name of Hadrian's Villa, of which the circuit was nearly ten Italian miles. To form an idea of the immensity of this imperial villa, we must imagine to ourselves a town, or rather a city, composed of temples, palestiæ, gymnasiæ, baths, pleasure-houses, lodgings for officers, friends, slaves, and soldiers, and an infinity of other buildings, both of utility and show. The theatre is still partly remaining as a witness of its former splendour. In this villa, Hadrian, with much good taste, imitated all the best buildings of Greece; such as the Lyceum, the Academy, the Prytaneun, the Portico, the beautiful Temple at Thessaly, and the Poikile or painted portico of Athens. He had also, among the gardens and pleasure-grounds, representations of the Elysian fields and of the realms of Pluto.

The statues and other remains of ancient sculpture which have been discovered among the ruins of this mass, during the last two hundred and fifty years, have enriched the cabinets of all Europe, and there are considerable excavations yet to be made. This villa of Hadrian appears, from all descriptions, to have excelled even the specimens of Asiatic magnificence. The liberality of the Emperor to the cities of Greece, which were reviving in

his time, and particularly to Athens, induced the Athenians to name after him the new part of their city, *Hadrianopolis*.

At this juncture the Greek style of architecture was well understood by the Romans, and more chastely employed than in any other period of their history, the florid style of decoration being mostly confined to the interior of their buildings. This epoch of Roman architecture being thus the most pure and important, I have thought the following summary might be here usefully employed in fixing the dates of their styles upon the memory.

After the burning of Rome in the reign of the Emperor Nero, he employed the architects Celer and Severus in the re-building of several edifices, and principally his golden palace, which surpassed in richness and decoration all that had previously existed. Infinite decoration and crowded ornament flourished, and true taste in architecture declined till the time of Vespasian, when a better style began to prevail. The purest days in architecture and the other arts among the Romans were from the time of Augustus to Hadrian; they retrograded a little to that of Septimius Severus; but from his date the declination became rapid and decisive.

The principal work of the Emperor Flavius Vespasian was his grand amphitheatre. Among those of his successors are:—First, the arch of Titus, the order of which is the finest specimen of the Composite we are acquainted with, and which, by the bye, is the order mostly used in their triumphal arches. Second, the arch of Septimius Severus, erected by the senate and people of Rome, in honour of that emperor and his sons Caracalla and Geta, for their victories over the Parthians and other barbarous nations. This arch is of marble and has three openings, decorated with eight fluted columns of the Composite order, and with *bassi rilievi* in an indifferent style, representing the expeditions of this Prince against the Parthians, the Arabs, and Adiabeniensians, after the murder of Pescenius and Albinus. Although the decadence of the art is very perceptible in this arch, yet, being in imitation of other works of the same nature, it serves to give an idea of the taste for splendour manifested at the period.

Other buildings of the period to which I now desire to call your attention are the Stadium; the Naumachia; the Forum, began by Domitian and finished by Nerva; the splen-

did Palace of Domitian, erected under the direction of the architect Rabirius; and the Aqueduct of Nerva, by Frontinius. In the reign of Nerva were built the forum, the column, and the triumphal arch, which bear his name. None of the Roman Emperors encouraged architecture more than Hadrian, who not only employed the ablest architects and erected the most splendid buildings, but studied the art himself with the warmth and enthusiasm of a professor. Among the best works of Hadrian are the splendid Corinthian temple at Nismes, called the *Maison Quarrée*; the Ælian bridge; and the entire rebuilding of Jerusalem, which he ordered to be called *Ælia Capitolina*. He continued the building of the temple of Jupiter Capitolinus, at Athens. This emperor was a fine judge of architecture; and the names of the artists whom he employed, and the works which they built, are proofs of his good taste.

Under the Antonines were built the temple of Antoninus and Faustina, a work replete both with the merits and defects of the Roman style of architecture; the column of Antoninus, and that of Marcus Aurelius; there were also numerous public edifices erected in

other parts of the empire ; nor must we forget the re-building of Smyrna, Laodicea, and other towns in Asia Minor.

From this period architecture rapidly declined, as the debased style of the arch of the Goldsmiths' and that of Septimius Severus, erected by himself, fully proves. Under Alexander Severus architecture and architects met with much encouragement, but the purer taste of former days existed no longer.

Under Constantine the art fell still lower ; as is abundantly shown by the style of the many temples and Christian churches built in his reign. His artists even descended to the meanness of despoiling the ancient structures of Rome (through despair of equalling them) to decorate their new buildings.

But it was when Constantine established the seat of his empire at Byzantium (which he wished to have called *New Rome*, the Goths and Vandals having made their dreadful incursions into the sacred Roman empire) that pure architecture was finally lost ; and, instead of embellishing their cities with temples, theatres, and works of peace,—castles, towers, fortifications, and other specimens of military art, were all the architecture of the time.

Constantine stripped Rome of all that he

could remove to grace his new capital. He was attended by all her best artists, both Greek and Roman. Three hundred years afterwards, when Rome had been sacked by Alaric, Genseric, and Totila, Constantius II. went thither, and carried away whatever was left of much value, with which he loaded several vessels. These were driven by a tempest into Sicily, where he was killed; and the Saracens, then masters of the country, took these valuable spoils, and carried them to Alexandria. A similar disappointment had occurred to the hopes and plunder of Genericus, whose vessels, laden with statues, were lost on his return to Africa. Thus was terminated all the elegance and splendour which Rome had been accumulating for more than a thousand years.

This brings us to the hybrid system, called the Greco-gothic, under which may be classed that early style which predominated about this time in the lower empire, and is little more than a degeneration of the Roman adaptation of the Greek styles. It comprises those buildings which were erected with the fragments of the Grecian and Roman edifices, such as columns, cornices, friezes, statues, and other architectural and sculptural remains, of marble and granite, used with some portion of pic-

turesque effect; such are the portals and tower of St. Mark, at Venice;* the cathedral of

* This noble structure is three hundred and thirty feet high, forty feet square, and its walls five feet thick, Venetian measure. N.B. The Venetian foot is 1.137 English. It was erected by Buono, a celebrated architect and sculptor of the twelfth century, whose works embellish the cities of Naples, Pistoia, Florence, and Arezzo. Its foundations were laid in the time of Pietro Tribuno, the seventeenth doge of Venice, A.D. 888; and completed, after various alterations in its design, by the aforesaid Bruno, in the dogeship of Domenico Morosini, the thirty-seventh doge, from 1148 to 1154. In 1329 it was repaired by the architect Montagnana, in the reign of Francesco Dandolo, called *il Cave*, the fifty-second doge. In 1400 it was damaged by fire at the celebration of the creation of Michael Steno, the sixty-third doge; the roof, which was of timber, was burned by a thunderbolt, and rebuilt of stone in its former shape. The tower contains a second one in the inside, with a vaulted ascending plane between the external surface of the walls of the inside tower and the internal surface of the walls of the outer tower, so spacious that a man on horseback may ascend with ease from the bottom to the top. On the apex of the roof is the figure of an angel in bronze, fourteen feet high, working, as a weather-cock, on a spindle and pivot of iron; which was added under the government of Lionardo da Loredano, the seventy-fifth doge.

An ancient manuscript in the sacristy of St. Marco, at Venice, recounts a miracle that occurred to a workman engaged on it—as follows, “ *Dum consumandæ proceræ turris campanariæ, juxtâ ecclesiam sancti Marci in altum erectæ, quidam operarius operam daret, ejusque vertice*

Pisa, built by a Greek architect of the name of Buschetto da Dulichio in the eleventh century; the baptistery of Pisa; and many similar buildings; constructed with a mixture of antique fragments and the natural materials of the country. Nicolo da Pisa, with his pupils, and Arnolfo da Lapo, are names celebrated with regard to this peculiar province of Italian architecture.

Our next inquiry refers to that dark and barbarous period called the Saracenic, on which I will not detain the reader long.

Egypt and Syria present many specimens of Saracenic architecture, which form a striking contrast with the ancient Egyptian and Greek styles. The Saracens, in Egypt, have borrowed but little (if any) of their style from the

perficiendæ diligentius inserviret. Delapsus exteriùs, in præceps forebatur. Sicque ad ima descendendo, inter ipsa præcipitia votum vovit Deo, et B. Marco, se mansuram perpetuo inferuitio St. Marci, si eum de instanti periculo liberaret. Cumque cadens hæc flemitur promississet, ligno cùidem, quod extra endeam turrin sub ejus medio prominebat ipsi turri propter operam exteriorem injectum, sine aliqua corporis læsione adhesit, ibique tandiù absque labore se tenuit, donec fune submisso, incolumis in terram veniret. Promissionem autem, et votum, quod fecerat, devotè implevit, et assiduè in sancti operibus laborans, saluberrimè diem clausit extremum.

aborigines of the country. The style called Saracenic, which is justly supposed to have been the parent of the Gothic, is distinguished by the boldness and loftiness of its vaultings; the peculiar mixed form of its curves; the slenderness of its columns; the variety of its capitals; the prodigious multiplicity of its mouldings and ornaments; presenting a showy assemblage of friezes, mosaics, foliage, and arabesques, interlaced with flowers, and disposed altogether with much skill.

The *Egyptian Saracenic* differs from the *Spanish* principally in the form of the arch, as may be seen by comparing the gate of Cairo with that of the Alhambra, in Grenada, or the great church at Cordova. Among the principal remains of the former style are the walls of Alexandria, built, in 878, by the caliph Motah-wakkel; several arcades of the aqueduct of Alexandria, which are distinguished by the medley of the capitals; the greater and the smaller pharos, the mosque and the ancient palace of the sultans, in the same city: there are also several buildings of the sultan Saladin, whose real name was Joseph, or Jussuf, which bear his latter appellation, as the wells at Cairo, the Granaries, &c.

The Moorish, or Mauresque, is but a varia-

tion upon the Saracenic ; yet as Mullin, in his *Antiquites Nationales*, uses the term, I have, in deference to his authority, preserved it. Its examples are not numerous, and may be found in his *Dictionnaire des Beux Arts*.

These several styles, though of various dates, are either of the period of, or have emanated from, the immersion of architecture in the dark or middle ages.

The revival of classical architecture is of too much importance to be considered at the close of a Lecture, yet I may be permitted to characterise the style of the earlier part of this period, which was debased in taste by the pictorial vagaries of Michelangiolo and of Raffaelle, whose twisted columns were better suited to accommodate, by their spiral lines, the composition of his celebrated Cartoon of the Beautiful Gate, than to adorn or support a portico. His relation, Bramante, was little better ; together with the fantastic Borromini, whose vagaries in the church of St. Giovanni Laterani, with his broken and compound pediments, his grotesque columns, cartouches, &c. are huddled together in that expensive compound of absurdity.

The character of the time immediately alluded to was, indeed, a conceited affectation

of novelty and invention, — adding embellishments to the already embellished ancient Roman style, decorating the shafts of the columns with rustics, blocks, and bossages; making grotesque orders; twisted and double-shafted columns; entablatures without friezes, friezes without architraves, and architraves without friezes;—all used and omitted by turns. Dorics with Corinthian foliage to their capitals and bases; Corinthians with Doric triglyphs; and arches springing from columns, as in the church of St. Paul without the walls, at Rome, the fine marble columns of which were stolen from the mausoleum of Hadrian, and which the appropriators had not ability to cover with architraves. This is among the many errors which have arisen from the beautiful invention of the arch.

Many of these tasteless innovations have sprung up in our metropolis, and are daily excluding the classical introductions of Wyatt, Stewart, Chambers, and Revett.

LECTURE VII.

The Origin and History of Architecture in Great Britain and Ireland. Ancient British or Druidical; Stonehenge; Avebury, &c. the round Towers and Excavations in Ireland. Conjectures thereon. Gothic Architecture briefly considered and traced to its elementary Principles. Introduction of Italian Architecture into England, and the History and Progress of the Art, from INIGO JONES to the Death of SIR CHRISTOPHER WREN. Its Torpor during the Reigns of George I. and II. and Revival, with the other Arts, under George III. Architectural Characteristics of this Period to the Introduction of the pure Greek Style.

LECTURE VII.

THE commencement of architecture in England was similar to its commencement in every other country. The caverns and huts of the aborigines of the island were gradually improved from mere necessities of life to comforts and luxuries.

There exist in this country the most indisputable proofs of an aboriginal style of architecture, and of successive introductions of foreign styles at various periods of our annals: and here again, as I have more than once taken leave to observe, does architecture prove the truth of history.

Egypt may boast of its pyramids, India of its excavated temples, Italy of its Pæstum, and Greece of its cyclopean works, alike defying history and conjecture,—England and Ireland possess antiquities as aboriginal and as remote from accurate date in the Avebury, the Crômlechs, the Stonehenge of England, the round towers, the excavations, the ruins of the

seven churches, and St. Kieven's bed of Ireland.

The origin of its architecture is so intimately connected with that of the nation itself that an inquiry into the one necessarily involves the other; therefore, rejecting the accounts evidently fabulous of our earliest chronicles, I will venture to form a conjecture respecting our most remote ancestry.

Sir William Jones, in his luminous discourse on the origin and families of nations, says:—With our great Newton, “*we must not admit more causes of natural things than those which are true and sufficiently account for natural phenomena;*” and that one pair at least of every living species must at first have been created, and that one human pair* was sufficient for the population of our globe, in a period of no considerable length, (on the very moderate supposition of lawyers and political arithmeticians, that every pair of individuals left on an average two children, and each of them two more,) is evident, from the rapid increase of numbers in geometrical progression, so well known to those who have ever taken the trouble to sum

* Ninth Discourse.

a series of as many terms as they suppose generations of men in two or three thousand years.

This profound philosopher then proceeds, with all the learning and scepticism of a genuine searcher after truth, to compare the Mosaic account of the peopling of our globe with probability and with history; and comes, after a series of incontrovertible arguments, to the supposition that the children of Jáfet seem, from the traces of Sklavonian names, and the mention of their having been *enlarged*, to have spread themselves far and wide and to have produced the race which, for want of a correct appellation, we call *Tartarian*; the colonies formed by the sons of Ham and Shem appear to have been nearly simultaneous; and among those of the latter branch he found so many names preserved to his day in Arabia, that he hesitated not in pronouncing them to be the same people whom hitherto we have denominated Arabs; while the former branch, the most powerful and adventurous of whom were the progeny of Cush, Misr, and Rama, names remaining unchanged in Sanscrit, and highly revered by the Hindus, were, in all probability, the race denominated Indian.

From tours which I have recently made

through some of the most interesting parts of Ireland for architectural antiquities, and from considerable investigation into its history, I conceive that country to have been peopled originally from the east; the ancient architecture, the ancient religion, the ancient language of Ireland, and those of the inhabitants of Hindustan and other oriental countries coinciding in a wonderful manner. In corroboration of this hypothesis I take leave to cite the opinion of Mr. Robert Fraser, in his "Statistical Survey of the county of Wexford," which he drew up for the consideration and by order of the Dublin Society. "On these great arguments," he says, "we rest; for, if they, the ancient inhabitants of Ireland, had not had an intercourse in former days with the Phœnicians, Egyptians, and Persians, how is it possible that so many hundreds of words, so many idioms of speech, so many technical terms in the arts, of those ages, could have been introduced into the old Irish dialect? terms not to be met with in the dialect of any other northern or western nation. What people, the Egyptians and Irish excepted, named the harp or music *ouini*; Irish, *ainé*? i. e. *oirfideadh*, i. e. music, a musical instrument; *oirphideadh*, or *oirfideadh*, expresses the action of playing.

What people in the world, the Orientalists and the Irish excepted, call the copy of a book *the son of a book*, and echo *the daughter of a voice*? With what northern nation, the Irish excepted, are the oriental names of the tools and implements of the stone-cutter, the ship-builder, and the weaver to be found?"*

Now I am upon the similarity of words, the similarity of the names of letters is no less striking; the first letter of the Irish alphabet is called *ailim*; that of the Hebrew, *aleph*; the second Irish, *beith*; the second Hebrew, *beth*; *m* in Irish is *muin*; in Hebrew, *mem*; *n* in the former *nuin*; and in the latter, *nun*; *r* is *ruis*, and *rus*; and other similarities, almost as striking, occur in the two alphabets. Mr. Lynch, the learned secretary to the Gaelic Society of Dublin, says, in his Grammar, that the names of the Irish letters are very ancient, and seem to have been originally derived from the Noachic language, from which they were adopted by the Chaldeans, Egyptians, and Canaanites, or Phœnicians, and by these introduced into Greece and the south-west of Europe. This also is the opinion of Eupole-

* Statistical Survey of the county of Wexford, by Robert Fraser, Esq. p. 140, Dublin, 8vo. 1807.

mus, Eusebius, St. Jerome, St. Augustine, and Bellarmine, with most of our modern philosophers.

Beth signifies, both in Hebrew and in Irish, *a house*; *coph*, a curve; *daleth* in Hebrew, and *durras* in Irish, *a door*. Many other equally-striking coincidences might be cited.

The pyramids of Egypt have narrow passages and dark chambers.* At Benares, the most ancient seat of Braminical learning, there are also pyramids, on a small scale, with subterraneous passages which are said to extend many miles. These narrow passages leading to the cell, or adytum, of the temple, appear to render the holy apartment less accessible, and to inspire the votaries with more awe. Here we have a perfect resemblance between the worship of the ancient Egyptians and the ancient inhabitants of Hindustan. The caves of the oracle at Delphos, of Trophonius, and of New Grange, in Ireland, had narrow passages answering the purposes of those in Egypt and in India; "nor is it unreasonable to suppose," says Captain Wilford, in his learned Dissertation on Egypt, from the ancient books of the Hindus, "that the fabulous relations of

* Asiat. Res. vol. iii. p. 439.

the Grot of the Sybil in Italy and of the purgatory of St. Patrick in Ireland were derived from a similar practice and motive, which seem to have prevailed over the whole pagan world, and are often alluded to in scripture."

New Grange, which is one among many singular caverns in Ireland, is a large mount, or pyramid, surrounded by a circle of stones, near the county town of Drogheda, about twenty-five miles north of Dublin. A Mr. Campell, who resided there about the beginning of the last century, observing stones under the turf, removed some for purposes of building, and perceived an aperture, which overhead was covered by a large flat stone. A person entering it must stoop for a considerable distance, when the upper part increases in height until the entrance of the temple, which is formed in shapelike a bee-hive, rising in height above twenty feet. The gallery is sixty-two feet long; and the arms of the cross, or transepts, twenty feet. The cupola is formed of long flat stones, the upper ones projecting over the lower, and closed and capped with a flag-stone, which is precisely the manner of constructing the Egyptian arch in the great pyramid. The sides are made up of large hewn stones, ornamented with sculptures; and there are two altar-

stones in the transepts. Wormius describes such crypts among the ancient Skandinavians, and adds, that they were both sepulchres and temples. Such was the pyramid and excavation of New Grange,* for the skeletons of two human bodies were found in it, with the bones of deer and other animals, and two boat-shaped urns.

I doubt not but that this interesting work is of as great antiquity as any in Europe, and was a burying-place of the ancient Irish, although its cross-like shape has induced some

* The Firbolgs, or Belgic colonies, who succeeded the Celtes, were a different and more improved people. Like their brethren in Germany, they dwelt a great part of the year either in natural or artificial caverns: the number of the latter discovered in Ireland evinces that they well knew how to form antrile chambers of dry stones, and cover them with long projecting flags. In these the Firbolgian priests instructed their disciples, and practised divination; and they always adjoined their stone temples, as at Roscarbury, Killossy, and many other places. At length they became the cemeteries of illustrious chiefs and warriors, and, as at New Grange, had conical mounts raised over them, surrounded at top and bottom by circles of ponderous uprights. Skilled in the manipulation of metals, the Firbolgs could easily have squared and polished wood and stone, and erected neat and convenient houses, but the rude state of society prevented the proper application of their knowledge.—*Grose's Antiquities*, vol. ii. p. 3.

to think it of the time of Christianity. On its first discovery a gold coin of the Emperor Valentinian was found in it, which Dr. Llhwyd observes might bespeak it Roman, but that the rude carving at the entry of the cave seems to denote it to be a barbarous monument.

ODIN, the leader and legislator of the Goths, who has been described as of *Asiatic* origin, commanded great mounts and huge uprights to be raised over illustrious men, after their bodies were burnt and collected into urns: and this cavern, the mound of stones, with the bones and horns of the deer, and the urns, remind us forcibly of the ordinance of this great Gothic legislator.

The external base of the mount was encircled by a number of enormous unhewn upright stones, ten of which were remaining in 1770. They are from seven to nine feet above ground, and weigh from eight to ten tons each. One stood on the summit of the mount, like that near Hadjipoor, in Hindustan, described in a former Lecture, and the obelisk represented as having been on the top of one of the Egyptian pyramids,—where, in conformity to the northern practice, sacrifices were annually per-

formed in memory of the deceased. In the cave, or excavated temple, are two oval rock basins, one in each arm of the transept. On one of the stones was a sculptured volute, which may indicate that it was dedicated to Woden or Jupiter Ammon. On another lintel was a delineation of lightning, as if sacred to Thor.

I will say nothing of the similarity of names between *Erin*, Ireland, and *Iran*, Persia; conjectural etymologies being too vague for historical research. But I think no objection can be raised to the proofs which Sir William Jones gives us in his discourse on the Persians, "that the writing at Persepolis bears a strong resemblance to that which the Irish call *ogham*." The word *agam*, in Sanscrit, also means "mysterious knowledge;" they may not have had a common origin, but it appears very likely from what I have adduced: and if the characters in question be really alphabetical, they were probably secret and sacerdotal, or a cypher perhaps of which the priests only had the key. *Boodh* also in Irish, and *boodh* or *boodha* in Sanscrit, mean the same upright unhewn stone of worship. These resemblances are forcible; and I will no-

tice, in addition, the similarity apparent between some of their buildings: for instance, no one acquainted with the subject could avoid being struck with the likeness of one of the round towers of Ireland, that of Kilkenny, measured by myself, to one of the ancient towers or pillars of India—that near Allahabad.

Sir William Jones observes, that the three races whom he had already mentioned, and more than three he could not find, migrated from Iran as from their common country; and thus the Saxon Chronicle, I presume from good authority, brings the first inhabitants of Britain from Armenia; while a late very learned writer concludes, after all his laborious researches, that the Goths or Scythians came from Persia; and another contends, with great force, that both the Irish and the ancient Britons proceeded severally from the borders of the Caspian sea;—a coincidence of conclusions from different *media*, by persons wholly unconnected, which could scarcely have happened if they were not grounded on solid principles.

Where chronology fails we can no longer follow chronological order; therefore, as the much-disputed subject of the round towers of

Ireland is now before us, I will take them prior to some of the ruder antiquities of this country.

The round towers of Ireland, of which I have a list of nearly seventy now remaining, are among the most singular and disputed buildings of antiquity. They resemble one another in general appearance, and vary from thirty to one hundred and thirty feet in height, and from thirteen to nineteen or twenty feet in diameter. Their resemblance to the pillars or round towers of the east cannot but be remarked. These structures have opened to men of leisure and erudition a spacious field for conjecture. Giraldus Cambrensis mentions them as early as 1185; John Lynch alludes to them in 1662, and says the Danes who entered Ireland, according to Giraldus, in 838, are reported to be the authors of our orbicular narrow towers. "They were called," he says, "*clock theach*, or the house of the bell." Peter Walsh wrote of them in 1684, and Dr. Molyneux in 1727. Since these, Dr. Ledwich and Mr. Grose are the most satisfactory. Some writers think that they were watch-towers or beacons to observe the approach of an enemy, and others that they were merely

belfries to warn the country round of danger or to call the people to worship, because they are mostly found near their ancient churches. To me this hypothesis appears quite unsatisfactory: the tower at Kilkenny, which I measured and investigated last spring, is, indeed, evidently older than the cathedral, the south transept of which appears to have been shortened in its original building on account of the round tower, which is within a very few feet of it. Other antiquarian writers suppose them to have been the residences of anchorite monks, in imitation of eastern pillars similar to that of Allahabad. Some few imagine them to have been places of penance, or purgatorial pillars, in which the penitent was elevated according to his crime, and descended as his offences were expiated.

A description of one may serve for the whole; and I will take that at Monasterboice, three miles from Drogheda. This fine tower is one hundred and ten feet high, and fifty-one feet in circumference, beautifully diminishing like the shaft of an antique Doric column. Its diameter is seventeen feet, and the thickness of the walls, which are built of a blue stone found in the neighbourhood, three feet six inches;

the door is five feet six inches high, twenty-two inches wide, and six feet above the present level of the ground. The ancient church, which is close to it, is now in ruins. In the church-yard are two very old and curious crosses ; one, about eighteen feet high, covered with sculpture, is called St. Boyne's cross, and is esteemed the most ancient religious relic now in Ireland. It is of one stone, and is said to have been sent from Rome and erected by order of the Pope. Among the sculptures on it, there is an inscription in Irish characters in which is plainly legible the name of Muredach, who was for some time king of Ireland, and died in 534, about a hundred years before the arrival of St. Patrick in that kingdom.

This, however, is by no means the loftiest round tower ; that of Drumiskin, in the county of Louth, being one hundred and thirty feet high, and that of Kildare, or Chilledaire, being one hundred and thirty-three feet high, and only eighteen feet in diameter. The latter extraordinary building, the walls of which are but three feet six inches in thickness, is built of fine white granite to about twelve feet from the ground, and the rest of the blue stone of the country ; the door is fourteen feet from the

ground. Chilledaire signifies the *wood of oaks*, and was a large ancient forest, comprehending the middle part of the present county of Kildare. In the centre of this wood was a large plain sacred to druidical worship, and now called the Curragh of Kildare, celebrated as a race-course.

My next subject will be those very ancient and rude structures in both kingdoms, commonly understood to be druidical remains; and first, though briefly, of cromlechs. These monuments are called by the Welch *cruw lechew*, or bowing-stones, because they bowed before them in their ceremonials of religious worship. Both the northern and eastern ancient superstitions ascribed divine qualities to monstrous unhewn stones, which they adored as Gods.* A circle of twelve, with one in the centre representing the prime deity, became a temple, within which they performed sacrifices and other religious ceremonies, elected and inaugurated their kings, and held their courts of justice.

Cairns, or immense conical heaps of stones raised as a rude monument, are numerous in

* Grose, vol. i. p. 6.

Ireland ; and one can travel but little in the interior without frequently meeting them.

Dr. Macpherson is doubtful whether the Cairns in the Scottish isles were reared by the Norwegians or Old Britons of Caledonia ; adding, that there are Cairns in Aberdeen and Inverness, and in Caernarvonshire, where the northerns never penetrated.

Near the town of Naas, in the county of Kildare, I saw, last spring, among some ancient ruins of a round tower, and other relics, several under-ground caves beneath the circles, such as are alluded to in Ossian. “ Go, Ferchios,” says the poet, in his *Fingal*,* “ go to Allad, the gray-haired son of the rock ; his dwelling is in the circle of stones.” This Allad was a druid, and is called the son of the rock, evidently, from his dwelling in a cave ; and the circle of stones is the pale of a druidical temple. The hero then visits the druid, and Allad gives him his answer ; the hero’s reply to the priest proves the druid’s dwelling place to be in the cave. “ Allad,” said the chief of Cromla, “ peace to thy dreams in thy cave.” The holiness of caves was as firmly

* Book v. p. 43.

believed in as that of groves, and therein the druids performed divine offices, and taught their disciples.

The architectural antiquities of Ireland present a fine unexplored field, to which I trust I may have leisure to turn more of my attention. There are ruins of between thirty and forty abbeys of splendid architecture. Those of Jerpoint and of the Black Abbey, in the county of Kilkenny, are finer than any I ever witnessed in England, not even excepting the far-famed Netley-Abbey, in Hampshire. Then there are their mounts, their cairns, and their caves ; their round towers ; their ancient cathedrals ; and the modern Baalbeck, the deserted city of Killmalloch, in the county of Limerick ; likewise the remains of the seven churches at Glendaloch, in the county of Wicklow ; and the bed of St. Keiven, immortalized by the muse of the Irish melodist ; together with their cromlechs, which rival any in England.

The cromlech at Tobin's Town, in the county of Carlow, forms a sort of rude temple. On the west end is a porch, or portico, formed by two upright pillars, somewhat round but irregular, each eight feet high, terminated behind by a broad flat stone, eight feet high and nine feet broad, which, being set on the edge,

makes a portico of six feet wide and four feet deep. This is covered by the large sloping stone, or cromlech, which is twenty-three feet long, eighteen broad at the upper end over the portico, and six feet at the lower or back part, where it rests on small stones about a foot high. Its thickness at the upper end is four feet, and at the lower two. The under surface is plain, and the upper convex. The upper surface has a large channel, from which branches a number of smaller ones: some antiquaries think these natural, others (with more probability) artificial, and intended for sacrificial purposes. The sides are enclosed and supported by several upright stones from three to six feet high, thus forming a room or cell not unlike the Monopteral temples of the Egyptians, eighteen feet long, eight feet wide at the upper or west end, and five at the opposite one; eight feet high in front, and two behind; perfectly secure from every inconvenience of weather. From the portico, westward, is a sort of avenue nearly one hundred and twenty feet long, formed of small irregular artificial hillocks. This curious remain of ancient Irish architecture is situated in a low plain field, near a rivulet, on the road from Tullow to Hachetstown.

The other cromlech, at Brown's Town, is in a field about a mile and a half from Carlow; it consists of an immense rock stone, raised on edge from its native bed, and supported at its east end by three rude columns. At a small distance is another pillar by itself, nearly round, and five feet in height. The covering-stone, or cromlech, is twenty-two feet ten inches long, eighteen feet nine inches wide, and four feet six inches thick at the upper part, having nearly two thousand cubic feet of stone, weighing ninety tons, and making, with the horizon, an angle of thirty-four degrees.

A very singular specimen of ancient Irish architecture, which is certainly one of the most curious fabrics in these kingdoms, must be noticed,—the stone-roofed chapel of the ancient king Cormac, at Cashel, who was, after the patriarchal mode, both king and bishop, and flourished about the year 908.* It is supposed to have been erected about the year 1134, and dedicated to that celebrated royal priest; and yet Ware, in his *Antiquities*, says, that when Roderick O'Connor, King of Connaught, in the year 1161, built a stone castle at Tuam, it was considered such an extraordinary

* Ware's *Ant. of Ireland*, p. 52.

work that the natives called it the *Wonderful Castle*. The aforesaid chapel of St. Cormac, at Cashel, is a regular ecclesiastical edifice, divided into a nave and choir, the latter narrowing in breadth, and separated from the nave by a wide arch. Under the altar tradition reports the remains of St. Cormac to be deposited. There is a striking resemblance between this chapel and the church of St. Peter, at Oxford, with Grimbauld's crypt beneath it. Its dimensions, plan, and section, may be found in *Grose's Antiquities*, and are well deserving the attention of the student.

I shall now proceed to a notice of English architecture of about the same date.

In those early periods of our history which are before the invasion by the Romans, our ancestors appear to have had scarcely any other dwellings than thickets, dens, and caverns; and, according to Tacitus and Cæsar, could have been little better in point of civilization than many of the recently-discovered inhabitants of the South Seas. Specimens of these ancient caverns are still to be seen in the western isles of Scotland and in parts of Cornwall. In some parts of southern England, however, particularly in Kent, the inhabitants

appear to have acquired a sufficient knowledge to build houses somewhat more substantial and convenient.

The earliest style of architecture practised in Britain appears to have been similar to that which is still used in the smaller hamlets of England, technically called by village architects "wattle and dab;" being a daubing or rude plastering over the chinks and crevices of the wattled walls of their wicker-worked cabins with clay, and filling up the interstices with moss. The roofs were formed, much after the present mode, with boughs of trees thatched with straw as a security against the weather.

The best authorities relate that the form of the wooden houses, or huts, of the ancient Britons and Gauls was circular, with lofty conical roofs; at the top or centre of which was an aperture for the admission of light and the emission of the smoke. This description of structure seems to have been the original house, and the early periods of the history of most countries exhibit it as the type and origin of their architecture. We can trace it from the ancestors of the polished Greeks to the aboriginal Britons; and the villages of the

Hottentots and Caffres of Africa exhibit it to this day.

The foundations of some of the largest of these ancient British mansions were of stone, of which there are yet vestiges in the island of Anglesey, and other thinly-populated parts of these islands. It is probably in imitation of these primeval wooden huts that the oldest stone buildings, of which there are remains in the western isles of Scotland and parts of Ireland, were built circular on their plan, and conical in their elevation, with circular apertures at the top; so that what was a mansion among the ancient Britons, and served the noblest of our ancestors for withdrawing-rooms, boudoirs, parlours, &c. would make an excellent though small-sized tile-kiln of the present day.

When the Romans first invaded this country, they found nothing according with modern ideas of towns or cities, but merely scattered assemblages of huts; for, according to Strabo, what the Britons called a town was a tract of woody country, surrounded by a mound and a ditch for the security of themselves and their cattle from the ravages of their enemies.

The palaces of their chiefs resembled those

of the common people in construction, and differed only in the size and solidity of their workmanship. From the expression of Carac-tacus, who, when taken captive and sent in triumph to Rome, wondered, in passing through its streets of palaces, how it was possible that a people possessed of such magnificence at home could envy his humble cottage in Britain, I should infer, as coming from the mouth of a primeval British monarch, that his subjects had made no considerable improvement in their architecture for at least an hundred years after the first invasion of the Romans.

Among the most ancient regular works of architecture in Britain (about A.D. 82) were the chain of forts between the Firths of Clyde and the Forth, which were built by Julius Agricola, and the wall of Antoninus, called the Picts' wall. Agricola is supposed also to have erected several temples, and as he is well known, on the authority of Suetonius, to have encouraged the arts of peace, we may be assured he did not neglect private conveniences and domestic comforts.

Other ancient architectural ruins, no less remarkable for their history and manner of con-

struction than those just mentioned, are the vitrified forts of the ancient Britons, several of which have been found in the highlands of Scotland, and on which many opinions and conjectures have been offered. Their antiquity is indisputable, their singularity from vitrification worthy of inquiry in a scientific point of view; but neither their construction nor their design, taken architecturally, render them worthy of detail in Lectures so limited as the present. Some authors think they must have been erected before the use of calcareous cements was known in Britain; *because*, as the country where they are found abounds with lime-stone, and as the builders would certainly have exerted all their powers to give them a proper degree of strength, mortar would certainly have been used by them had they been acquainted with lime-stone and its fitness for cements. In admitting the premises, I must take leave to deny the consequences; *because* the art of connecting stones by vitrification exhibits much more knowledge and a greater care for durability than the more common method of building and jointing with mortar.

Architects, sculptors, painters, and other artists and artisans, always accompanied a

Roman legion; and splendid marks of their footsteps are visible wherever they obtained admission. The first Roman colony was planted at Camolodum, the first city on the site of the present London, as early as the fiftieth year of the Christian era; and when it was destroyed by the Britons, in revenge for the cruel treatment of Boadicea, queen of the Icenî, about eleven years afterwards, it was a large and well-built town, embellished with statues, temples, theatres, and other public structures. From many circumstances it is apparent that these, like the early and provincial theatres and amphitheatres of Rome, were mostly of wood, till the time of Julius Agricola, who finally established the dominion of the Romans in Britain, and governed it during the reigns of Vespasian, Titus, and Domitian, with equal courage and humanity. I wish to lay some stress upon these points, as conclusive of the Roman style of architecture having preceded all others in this island, the hut and cabin alone excepted. The Romans not only constructed a great number of solid, convenient, and magnificent edifices for their own accommodation, but instructed, exhorted, and encouraged the Britons to imitate them.

Previously to going farther into the history

of the Roman or earliest style of architecture known in Britain, it is necessary that we should devote a portion of our attention to the ancient British or druidical architecture of the country, lest we should, in our admiration of foreign art, render ourselves obnoxious to the retort given to one whom an old English writer, in Peter Langtoft's Chronicle, calls a wandering wit of Wiltshire; who rambling, like many of our wandering wits of the present day, to Rome, to gaze at antiquities, and there screwing himself into the company of antiquaries, they intreated him to illustrate to them that famous monument in his own country called Stonehenge. His answer was, that he had never seen and scarcely ever heard of it. Whereupon, says our ancient chronicler, they kicked him out of doors, and bade him go home and see Stonehenge before he sought for curious antiquities abroad. "And I wish," continues he, "that all such æsopical cocks as slight these admired gems, and other our domestic monuments, (by which they may be admonished to eschew some evil or to do some good,) and scrape for barley-corns of vanity out of foreign dunghills, might be handled, or rather footed, as he was."

There are various and contradictory hypo-

theses respecting this mysterious edifice, (Stonehenge,) whose ruins may be denominated, in the words of the poet, as

“ Awful memorials, but of whom we know not.”

* * * * *

Which “ want no written history ; their’s a voice
For ever speaking to the heart of man.”*

I will offer a summary of these hypotheses.

Geoffry of Monmouth says, in a sort of legendary tale, that the stones were brought by giants from Africa to Quildare, in Ireland ; and by some legerdemain of Merlin, the great British enchanter, conveyed to the place where they now stand.

Camden describes them as they were in his days, and calls them so huge and monstrous a piece of work, that our oldest historians termed it, for its greatness, *Chorea Gigantum*, the giant’s dance. “ For my own part,” says this venerable antiquary, “ about these points I am not curious to argue and dispute, but rather to lament, with much grief, that the authors of so notable a monument are thus buried in oblivion. Yet some there are that think them to be no natural stones hewn out

* Rogers.

of the rock, but artificially made of pure sand, and by some gluey and unctuous matter knit and incorporate together, like as those ancient trophies and monuments of victory which I have seen in Yorkshire. And what marvel? Read we not, I pray you, in Pliny, that the sand and dust of Puteoli, being covered over with water, becometh forthwith a very stone? That the cisterns in Rome, of sand digged out of the ground and the strongest kind of lime wrought together, grow so hard that they seem very stones indeed?"

The marvel, I would reply to this ingenious writer, who would reduce our grandest monument of ancient British art to mere compo and mastic, is, that if they were so composed, how come the mortices and tenons in the upright pieces and beams, which he speaks of, and which are well known to be there? These facts, together with scientific examinations, have long ago proved them to be a species of native rock, mixed with silicious grit and veins of iron.

"The common saying," concludes Camden, "is, that Ambrosius Aurelianus, or his brother Uther, did rear them up by the art of Merlin."

Inigo Jones fancied he found in these stu-

pendous ruins an hypæthral Tuscan temple, and offered many arguments to that effect in what I believe is a posthumous work, and was not intended by the eminent architect for publication; but there is no end to conjecture when a peculiar and favourite study occupies the entire mind. So did a living architect conceive that he found a temple of the pure Doric order in the biblical account of the temple of Solomon which speaks of chapiters embellished with lilies, net-work, and pomegranates.

Dr. Charlton, one of the physicians to Charles the Second, wrote a refutation of Jones's theory, which was by no means a difficult undertaking, and believed the pile to have been erected by the Danes for the election and inauguration of their monarchs.

In a manuscript, collected by Hearne, the antiquary, and printed in Peter Langtoft's Chronicle,* entitled, "*A Fool's Bolt soon shot at Stonehenge*," the author, or, as I presume he wishes to be called, the fool, says it was "some heathenish temple, demolished by the immediate hand of God, as an intolerable abomination unto him; yet with so much of it left standing as may declare what the whole was,

* Vol. ii. p. 483.

and how and why destroyed. And since," continues he, "all that have as yet written on this subject have contradicted and confuted each other, and never any has as yet revealed this misterie of iniquitie to this purpose, and that pedlars and tinkers, vamping on London way near it, may and do freely spend their mouths on it, I know not to the contrary but that I also may shoot my bolt a little further into it: however, I will adventure, were it for nothing else but to recreate myself sometimes after other studies, and to provoke my friends, which so much importune me to it, to shoot their acute shafts into it also, hoping that one or other of us, by art or accident, shall hit the mark."

It has also been asserted that it is not of so great antiquity as many have supposed, because Gildas Badonicas, of Bath, (which is within thirty-five miles of Stonehenge,) who wrote in A.D. 543, does not mention it; nor the venerable Bede, who wrote in A.D. 727 of many extraordinary curiosities of the country; nor William of Malmsbury, a Wiltshire man, who wrote in A.D. 1142; nor those celebrated ancient writers, Ethelwred, Hoveden, and Ingulphus; nor Matthew Paris, nor Westmonasteriensis, nor Florentius Wigorniensis.

Yet a writer of the same period, Henry of Huntingdon, in speaking of Stonehenge, says that this Stonage did astonish them ; this did amaze them ; that they durst not labour lest they should lose their labour and themselves also.

Sammes, an antiquary, who published his opinions in his *Britannia*, conceives it to have been a work of Phœnicians.

Aubrey, in his *Monumenta Britannica*, endeavours to prove it to have been a temple of the druids, erected long before the Roman invasion of Britain.

An anonymous writer, cited by Gibson in *Camden's Britannia* as the author of "Nero-Cæsar," supposes it to have been a monument raised by the Britons in memory of Queen Boadicea, and that the barrows surrounding it were the graves of the slain. But many of these barrows have been found to contain the bodies of females and youths ;—hence it may have been a cemetery round the temple, with graves like modern church-yards.

Webb, the son-in-law of Inigo Jones, in his "*Vindication of Stonehenge restored*," endeavoured, with much misapplied learning, to defend his father-in-law's hypothesis of its having been a Roman temple of the Tuscan order.

Dr. Stukeley, a learned antiquary of the last century, published a very interesting and faithful description of this mysterious structure.— It is enclosed within a circular ditch. After passing this ditch there is an ascent of between thirty and forty yards. The diameter of the circle which stands thereon is about a hundred and ten feet. “When you enter the building,” says Dr. Stukeley, “and cast your eyes around upon the yawning ruins, you are struck into an extatic reverie which none can describe, and they only can be sensible of who feel it. Other buildings fall by piecemeal, but here a single stone is a ruin, and lies like the haughty carcass of a Goliath.” “If you look upon the perfect part, you fancy entire quarries mounted up into the air: if upon the rude havoc below, you see, as it were, the bowels of a mountain turned inside outwards.” The material is described by the Doctor as being of a very durable kind of English marble.

The outer circle consisted of sixty colossal cubes of stone, thirty of them being perpendicular or jambs, and thirty imposts or lintels. At present there are about seventeen left standing. The upright stones of the trilithons, or central masses of three stones each, are above

thirty feet high, well chiselled, finely tapered, and well proportioned in their dimensions. The whole number of cubes amounted to just one hundred and forty, according to Dr. Stukeley's computation.

Mr. Wood, an architect of Bath, made the diameter one hundred and sixty-four feet, and the number of stones one hundred and twenty-eight. The area of the temple is calculated to contain an English acre and a quarter of land; which, allowing eighteen inches square for every person, would render it capable of containing from twenty to thirty thousand individuals.

Dr. Smith, one of the last writers who has formed a conjecture upon this extraordinary relic of antiquity, published, in 1771, an hypothesis, wherein, improving upon that of his predecessor, Dr. Stukeley, he thinks it was not only a druidical temple, but also a building for astronomical observations, which he supports with great ingenuity.

In January, 1797, one of the trilithons fell with a concussion which was felt by some men at plough full half a mile off. An interesting account of this fall is related in the transactions of the Royal Society by Dr. Maton. The impost he conceives, by calculation, to

weigh upwards of 11 tons, and the weight of the entire trilithon to be nearly 70 tons.

How these colossal jambs and lintels were raised is a question of serious moment, and on a first glance it would appear only to have been compassed by a people who possessed the completest knowledge of mechanical powers. But, on further consideration, and by a reference to the account related by Herodotus of the very simple mode of building the pyramids, where the complicated labour of thousands of hands compensated for mechanical skill;—so may it have been in the days of the builders of Stonehenge, under the instruction of the druids, their priests. Mounds of earth may have been raised between and around the jambs, or uprights, and the lintel-stone have been rolled up by the power of innumerable hands; and when on its summit, and properly fixed on its perpendicular bearing-stones, the earth might have been removed by the hands which raised it.

Avebury, or Abury, about five miles from Marlborough, in Wiltshire, another similar circle to Stonehenge, is of larger dimensions, but much less perfect, to which similar observations may apply.

Respecting these stupendous remains of ancient skill, namely, the druidical temples of Stonehenge and Avebury in England, New Grange in Ireland, and the various other monuments of primeval British workmanship, with which the islands of the united kingdoms abound, hypothesis is all we can at present venture.

Returning from these visionary days to more authentic dates, and more established facts:—the art of building, from the time of Agricola, in A.D. 80, to the middle of the fourth century, flourished abundantly in our island: and the same taste for convenient, beautiful, and solid buildings, which had long prevailed in Italy, was introduced into Britain. The country abounded with well-built villages, towns, forts, and stations; and the whole was defended by that high and strong wall, with its many towers and intervening castles, which reached from the mouth of the river Tyne on the east, to the Solway firth on the west. This spirit of building, which was introduced and encouraged by the Romans, so much improved the taste and increased the number of the British artists, that in the third century this island was celebrated in that respect. When the Emperor Constantius, father of Constan-

tine the Great, rebuilt the city of Autun, in Gaul, A.D. 296, he was chiefly furnished with workmen from Britain, which (says Eumenius) very much abounded with the best artificers.

Not very long after this enlightened period, architecture and the other arts declined; and soon after the final departure of the Romans from Britain the pure taste in architecture was entirely superseded by new and depraved styles.

In the times of the Saxons, previous to the disturbed period of Hengist and Horsa, public and private edifices are related to have been constructed with much splendour. In the year A.D. 480 Ambrosius, a British commander of Roman descent, who had assumed the regal government of Kent, built a palace at Canterbury.

During the Heptarchy, or, as Mr. Sharon Turner, the historian of the Anglo Saxons, more aptly calls it, the Octarchy, churches and other ecclesiastical buildings began to be multiplied. The monks, the only architects of those days, erected these buildings, and formed that style now called Saxon, which, from its similarity in parts to the worst Roman, may warrant a conclusion which I am inclined to draw, that they designed them from the

help of memory alone. The elements of this style (the Saxon) are heavy round columns, and semicircular arches, bad resemblances of the worst Tuscan, covered with the round arch of the middle ages.

As a proof that the decline of the Roman style produced the Saxon, which was called by the monks, after the Norman invasion, "*Opus Romanum*;" let us imagine a country mason, ignorant of art but skilful with his chisel, to have observed a Composite capital of the depraved style of those of the temple of Bacchus, on the Mons Viminalis at Rome; or the Ionic capitals of the temple of Concord; or even a decent Corinthian; and to be desired at some considerable interval to carve some capitals as nearly resembling them as possible, from memory. Imagine this, and I would ask whether it be not more than probable that they would resemble the Saxon capitals of St` Bartholomew the Great in Smithfield, London, or those of the crypt of Lastingham-Priory, &c.

Hence, I think, the origin of the Saxon style may be fairly traced to the decadence of the Roman: and the introduction of the Saracenic, Arabesque, and Grotesque styles, aided by the practical and scientific improvement of the workmen, and the knowledge of the society

of travelling architects, the early freemasons, produced that singularly romantic style called the Gothic.

A Doric temple differs from a Gothic cathedral, as Sophocles does from Shakspeare. "The principle of the one is simplicity and harmony, that of the other richness and power. The one relies on form and proportion; the other on quantity and variety, and prominence of parts. The one owes its charm to a certain union and regularity of feeling, the other adds to its effect from complexity and the combination of the greatest extremes. The classical appeals to sense and habit, the gothic, or romantic, strikes from novelty, strangeness, and contrast. Both are founded in essential and indestructible principles of human nature."*

As excellence is never stationary, the vicissitudes of architecture in England may thus be arranged into classes or epochs, namely:—from the splendour of the Augustine age, an emanation of which reached us under the administration of Claudius, Antoninus, and Agricola, to the decline and hatred of Roman art and customs on the expulsion of the Romans from the island, and the establish-

* Hazlitt.

ment of the style called *Saxon*. Next arose another style, that called *Gothic*, with all its varieties, from the plainness of the Norman to the gaudy embellishments of the florid style; which latter flourished resplendently to its meridian in the time of the Henrys and Edwards, and declined with the revival of classical literature, in the reign of Elizabeth; when Roman, or rather Italian architecture began to mix itself with our native English, as did its words with our language; and we were then (Shakspeare excepted) pedants in both.

Palladio, who was the father of that style of Roman architecture which was introduced into England by Inigo Jones, and the disciples of his school, read Vitruvius's works in the true spirit of their author; and restored the actual ruins of ancient Rome in a purer style and with greater *gusto* than were most of their originals. Had Palladio engaged himself in a similar examination of the splendid ruins of ancient Greece, as they were in his days, still acquainting himself with the opinions of Vitruvius, he might have founded a school of architecture as much superior to that now called after him as are the works of Ictinus,

Callicrates, and Phidias, to the Colosseum and the Theatre of Marcellus.

Classical architecture shone forth in the Roman style in the beginning of the reign of Charles the First; perished with the Iconoclasts and roundheads of the commonwealth; rose again under Charles the Second with a momentary lustre, soon eclipsed by ignorance and bigotry in the reign of James the Second; and from that period till the commencement of the reign of George the Third, a mere blank is presented in the history of the art.

But to return to the introduction of the style called generically, and perhaps prejudicially, the *Gothic*; which is one of the most important although heretical inventions of a style in the annals of architecture.

The style called Gothic (let not the learned antiquary or amateur of our ancient English architecture start at the epithet; but, on the contrary, recollect that the originally opprobrious name for the members of the respectable Society of Friends is now become an honourable distinction;) I have heard sweepingly designated, by an eminent professor of the present day, as being any thing that is not *Grecian*; but whether this affected antithesis proceed

from humour or contempt I am not prepared to determine.

Our illustrious countryman, Wren, also, whose mechanical and mathematical skill elevates him above all other modern builders, called the Gothic a gross concameration of heavy, melancholy, and monkish piles. Now I will venture to assert that it is the very reverse of this definition, and not quite so opposed to Grecian art as was thought by the professor before quoted; but that the Gothic is a style of architecture pure, grand, impressive, and characteristic. The elements of it are spires, pinnacles, lofty-pointed windows, and *elevation*, as opposed to the *horizontal* line of the Greeks. Its character somewhat resembles that of the old German school of painting; and a fine Gothic edifice, with its elaborate and carefully-marked details, its gaudy colours, its vermilion, and its leaf-gold, reminds one of Albert Durer, and his hard but correct school.

England is the classic soil for this style of architecture, as ancient Greece is for that of the orders, and here the student must come to measure and to study it. York Minster is the Parthenon of Gothic architecture, Westminster Abbey the Theseum, and the chapel of Henry the Seventh the monument of Lysicrates.

Among the finest specimens is the venerable Abbey church of St. Alban's, in Hertfordshire, which is also one of the most valuable documents in the archæiological history of the country, as it embraces most of the successive styles in great variety from the Saxon to the pointed style.

Gothic architecture disdains the trammels and the systems of the schools; nevertheless it has its own laws, its genera and their species, although they have not yet been arranged in a grammatical form. Batty Langley endeavoured, it is true, to reduce it to a system, and to engraft on it the five orders of the Palladian school, instead of a more natural and philosophical arrangement; but this effort was altogether nugatory.

The elements of this style seem to be derived in every instance from its type—the cone or pyramid. Hence all we see in it is pyramidal. Its shafts shoot upwards; its arches are shaped like points of lancets; its windows form themselves into pyramidal tracery; and it has been not inaptly compared to a grove of trees. The origin and antiquity of the various-shaped pointed arches are elucidated in many able works on the subject: and an excellent illustration of the hypothesis of the pointed arch being

formed by the intersection of two Roman or semicircular arches, is to be found in the Abbey church of Malmsbury, in Wiltshire—an ecclesiastical fabric of great antiquity and beauty.

The epithet “GOTHIC” was not originally given to this style of architecture because it was the invention of the Goths, but because, in the opinion of those who so named it, it was a barbarous innovation upon true taste arising from the decline of art; which decline was, however, perceptible before the invasion of Rome by the Goths, the Roman architects having, after abandoning the style of the Greeks, fallen into the depraved taste of the eleventh and twelfth centuries.

Gothic architecture in Italy approaches the Roman more nearly than elsewhere, and particularly in the church of St. Paul, built at Rome by Constantine; the Cathedral of Pisa, built by a Greek named Buschetto of Dulichium; those of Orvieto, Sienna, and the great church at Florence, built by Arnolfo, in 1290. This latter style is sometimes called *arabaté desche*, being a mixture of Moorish, Greek, or Roman, with the German-Gothic. In Spain, where this style was probably introduced by the Moors and Saracens, it is

found, in the earliest examples, to be heavy, gigantic, and coarse; but, in later times, they have imitated the excessive delicacy and lightness of the Moorish, which has given birth to the Arabesque or Saracenic. The Moors, enemies by religion to representations of human beings or animals, introduced, on the contrary, in great profusion, stalks, fruits, and foliage; while at the same time the Franks, being Christians, have equally overloaded their style with grotesque figures of dwarfs, giants, griffins, sphinxes, &c.

The origin and progress of Gothic architecture in England is so well known, and so ably developed by many scientific writers, that it would be superfluous to mention it here; but of its rise and progress in France so much is not yet understood. It appears to have commenced in that country under Clovis; Clotaire I. built the church of St. Medard de Soissons: Childerbert I. that of St. Vincent, at Paris, now called St. Germain de Prés. At the commencement of the second century was built, by the order of Dagobert I. the Abbey church of St. Denys; Charlemagne contributed more than any preceding monarch to the national architecture of France, and, among other instances, built a grand church and a superb palace at

Aix-la-Chapelle. Under Charles the Bald was finished the Cathedral of Rheims, which was began by Louis le Debonnaire; and under Robert, the fine Cathedral of Chartres. The Abbey church of Beauvais is supposed to be of the time of Philip I. and the Cathedral of Annecy, of that of Philip Augustus, who also finished the grand entrance of the church of Paris, begun under king Robert; the church belonging to the Abbey of St. Denys was rebuilt and much enlarged by Suger, the abbot of St. Denys, in the beginning of the twelfth century (a work which historians assure us was finished in the space of three years and three months). In the same century was built the Cathedrals of Verdun, of Laon, Lirieux, St. Remy of Rheims, St. Nicaise, in the same city, the latter by Hugo Lebengeois, who built many others, and died in 1263. St. Louis and his mother Blanche erected a number of churches; and many courtiers, wishing to please them, imitated their example.

The greater part of the churches of this latter monarch's reign were built by Eudes de Montreuil, an architect and engineer of much estimation in his time; he was in high favour with the King, whom he accompanied in his

expedition to the Holy Land, where he fortified the fort and city of Jaffa. On his return to Paris he built many noble edifices, particularly the church of St. Catharine-du-val-des-Ecoliers; the Hotel de Dieu; those of St. Croix de la Bretonnerie, of the Blanc Manteaux, of the Mathurins, the Cordeliers, the Chartreux; the Holy Chapel of Paris, and those of Royaumont and Maubuisson.

To continue the history of this important style of the art in Italy, it is necessary to go back to the destruction of the Imperial city of Rome; which was commenced, A.D. 412, by Alaric, king of the Goths, carried on with barbarously mutilating all the works of art, by Oadoacer, and completed by Gensericus, king of the Vandals, about A.D. 456.

Ignorance and brutality so infatuated them that they left scarcely any vestiges of all the stately structures and sacred edifices of these fallen masters of the world; and in the year 596, the Saracens destroyed the beautiful cities of Messina and Cuma, where are the remains of the first triumphal arch, called *Arco Felice*. At Naples was the gate of Castor and Pollux, the proportions of which are preserved to us by the indefatigable industry of Palladio. Architecture continued in a depressed state

nearly eight hundred years, until, about the year 1388 or 1400 an academy was founded at Florence, in which were many great and noble men of genius, who, by inspecting those magnificent ruins, once more restored the art.

“ Mean time dread fanes and palaces around
Rear’d the magnific front.”

Thomson's Liberty, part 4. v. 245.

It would be needless to mention the names, even if they could be found, of all the illustrious individuals of which this academy was composed, or who flourished in this and the succeeding century, since their works sufficiently prove their unremitting assiduity to preserve the beauties of the ancient styles.

One of the first works of this academy was the celebrated church of *Sa. Maria da Fiori*, at Florence, an edifice which is held in high esteem by the admirers of the style, and is not inferior to any of the productions of the celebrated Palladio. It was originally designed by Arnolfo, assisted by Laurentio Ghiberto, a goldsmith and sculptor by profession, who leaving it unfinished, it was taken in hand by Fillipo Brunelleschi, born in 1377, who may

be looked upon as the restorer of ancient architecture and the founder of the modern classical style. After having prepared his mind by studying the writings of ancient authors, and the ruins of Roman edifices, which he carefully measured, he discovered the proportions of the orders, and recognizing the simple gracefulness of the ancients, founded a system upon lasting principles, whereby he was enabled to construct with beauty and solidity.

This architect erected the cupola of Sa. Maria da Fiori, at Florence; an undertaking beyond the abilities of any other individual then living; Arnolfo, the original architect of this vast Cathedral, having been two years dead. This cupola, rising from an octangular plan, is of great elevation, and only inferior in size to that of St. Peter's, at Rome. It is constructed by two vaults with a cavity between them, and was erected without centring. It is the only elevated dome supported by a wall without buttresses. In consequence of this and many other works of Brunelleschi, the learned commenced a study of the writings of Vitruvius, and a general taste for the principles of the art began to show itself amongst the Italians. Leo Batista Alberti, born A.D.

1398, was the first modern author who published a treatise on architecture, from which he has acquired great reputation, and is justly stiled the modern Vitruvius. Following the steps of Brunelleschi, he reformed, by his precepts and designs, many of the abuses and barbarous practices which then prevailed among his countrymen. Bramante had his share in the restoration of ancient art, and built many superb edifices. Pope Julius II. having projected the rebuilding of St. Peter's upon a scale of unparalleled magnificence, entrusted the execution of the design to Bramante, who conceived the idea of erecting the lofty cupola upon that immense structure. This vast work was carried on successively by Raffaele; San Gallo; and Michelangiolo, to whom its final design and completion are principally due. Architecture continued to flourish in the sixteenth century under the great masters Vignola, Serlio, Palladio, and Scamozzi; whose palaces and villas are, and will continue to be, the admiration of the connoisseur. To the unremitting assiduity of these distinguished artists in the study of the Roman edifices, and to their invaluable publications, the world has been much in-

debted for the elucidation of the principles of ancient art.

The list of the celebrated Italian architects may be almost said to close with Bernini, who flourished in the seventeenth century.

Roman or Italian architecture was brought into England under Inigo Jones, who was born in 1572, and whose distinguished works at Greenwich, Whitehall, and Covent-Garden, will ever secure him a place among names of the highest reputation.

Sir Christopher Wren, an eminent mathematician and philosopher, as well as architect, executed many of the finest buildings in London and other parts of England, in the modern style. St. Paul's Cathedral, inferior to none but St. Peter's in point of magnitude, and undoubtedly superior even to that both in skilful construction and design, will perpetuate his name to the latest posterity. The exterior cupola of St. Paul's is constructed of oak timber, and is sustained by a cone of eighteen-inch brick-work, which has a course of stone, the whole thickness, every five feet; and the intermediate parts are two bricks in length in thickness. This cupola was turned upon a centre, which supported itself without any

standard from below. From the inclined position of its supporting walls it has little or no transverse pressure ; yet, for greater security, it is hooped with iron at the bottom.

Of the great English masters who flourished about this period, Jones was grand but unequal; as may be seen in his celebrated work, the Chapel at Whitehall, the conception of which, as a part, and but a small part, of an immense palace, is certainly noble ; its primary divisions few and simple, its openings large and handsome, but it is unequal in composition and in style. The play of light and shade produced by the breaks over each column is in a minute taste, the very opposite to grand. The Ionic specimen is one of the worst and most impure he could have chosen ; the modillions do not belong to the order and approach too nearly to those of the Corinthian. If one order upon another be admissible, at all events the Corinthian should not have been excluded for the purpose of introducing the Composite.

Wren was more equal and consistent than Jones ; was possessed of more mathematical and general knowledge ; was a man of a more expanded mind ; but less of an architect by education, and had, generally speaking, less

taste. Perhaps nothing of Wren's is equal in taste to Jones's water-gate at York-buildings, and nothing of Jones's equals in scientific construction *any thing* of Wren's. Jones's Gothic, as shown in Lincoln's Inn Hall and Chapel, is decidedly bad : Wren's in St. Mary Aldermary, Bow Lane, is bold, if not quite pure ; in the tower and pinnacles of St. Michael's, Cornhill, still better ; and in the spire of St. Dunstan's in the East, unexceptionably fine ; perhaps this is the finest thing of its kind in Europe. St. Stephen's, Walbrook, has, I think, been extolled beyond its merits ; although novel in principle it is faulty both in construction and taste. His spire of Bow would alone immortalize any man ; so beautiful is it in form, so novel in design, and so dexterous in construction.

The works of Vanbrugh are solid and judicious ; but he neglected the lighter graces of his art, and is, with all his picturesque beauties, cumbrous and inelegant in detail. Swift's epigram on this artist is pretty generally known :—

“ Lie heavy on him, earth ! for he
Laid many a heavy load on thee.”

Yet Castle Howard and Blenheim will keep

alive the name and memory of Vanbrugh among those of our greatest architects.

Wyatt, who belongs more to our own times, and will be spoken of in my concluding Lecture, was richer and more learned in his art than either Jones, Wren, or Vanbrugh. Equally inventive, and with as fine a taste as Jones; less scientific perhaps than Wren, but more admirable in his details than any preceding English architect; he is at the head of our best school, from which has emanated all the finest works of the present day.

LECTURE VIII.

Consideration of the Subject from the Time of CHAMBERS, WYATT, and STUART, to the present Day. Critical Examination of the principal Architects and Buildings of this Period. The Character of English Architecture, as presented in our Public Buildings, investigated and compared with that of other Countries. The Progress of the Art compared with the Progress of Painting and Sculpture. Hints on Domestic Architecture. Brief Recapitulation or Summary of the Course; and Conclusion.

LECTURE VIII.

THE state of architecture at the end of the reign of George II. and for some time previous thereunto, had been as low as at almost any period of English history. From the death of Kent and the great Earl of Burlington, two accomplished architects of the Anglo-Palladian school, to the commencement of the reign of George III. we have no record or account of any one deserving notice. The profession seems to have been almost abandoned, and buildings, repairs, and alterations to have been performed by that anomalous being, that sort of uno-dual mixture of artist and artisan, the surveyor and builder.

Kent, Gibbs, and Burlington were gone, and had left no disciples; so was Hawksmoor, (the pupil of Wren,) who erected those cumbrous churches near the post-office, in Lombard Street, Limehouse, and St. George's in the East; and Archer, the *groom-porter*, as Walpole justly calls him, who built that of St. John's, Westminster, which looks like the four clumsy ill-carved legs

of a butcher's block, or an elephant on his back. The elder Dance, whose Mansion-house, in the city, was preferred to a design of Palladio's, from a motive of encouragement to native talent, was a man of some taste, as is proved by his Shoreditch church, the spire of which is a free and not unhandsome imitation of Bow. He was not a regularly educated architect, but the best and nearly the only one of his day.

Batty Langley, it is true, had a school or academy, but his disciples were all carpenters; a few of them, calling themselves surveyors and builders, and practising carpentry and box-making, were alive in my remembrance;—hating the “new-fangled Doric,” (as they termed it,) without a base, as much as they did a shirt without ruffles, or a wig without two good portly curls over each ear, and half a yard of tail behind; scorning its simple flutes without fillets, which they compared to ribbed stockings; and sincere in their admiration of the swelling shaft, the rusticated and twisted columns of Batty Langley. The schools at Oxford and the Royal Exchange were their schools; they lamented the shocking innovations of Wyatt and Soane, the more dreadful importations of Stuart, and were nearly going into

a fever when the portico of Covent Garden theatre was opened. Is it not dreadful, said one of these worthies to me, to see young men going back to the old Grecians, upon whom the Romans had so much improved? Had the poor man but lived to have seen his master's taste revived, it might have added a year or two to his existence. Although the taste of Batty Langley has been deservedly censured, he yet formed a class of clever workmen in a certain humble line of the art.

Such was the state of architecture when our late monarch ascended the throne; and it was fortunate for the arts that he was endowed with a love for, as well as a considerable acquaintance with, them all. In his grandfather's reign, when he was Prince of Wales, he studied architecture, and was taught to delineate its proportions from the rules of Palladio by the late Sir William Chambers, who was then a naval officer, fond of the art, and who had travelled. His Majesty also studied perspective under the late Mr. Kirby; and his drawings, some of which I have seen, were correct, and, for their day and style of art, tasteful and elegant.

Chambers became the royal architect, but threw no new lights on the profession. In its

practice, and in the more scientific part of construction, his knowledge was very limited, and his taste impure; yet his works have a chastened correctness of detail in the best style of Italian art.

In the course of his travels Chambers had visited parts of China, and published a treatise on the gardening and architecture of that strange people; and to him we owe the introduction of their fantastic and inelegant style. We do not observe this out of disrespect to the memory of Sir William; but the existence of these whim-whams demands reprobation from such as have a sense of the importance of a pure taste to the fame of our country; which feeling is of the more consequence in our noble art than in any other, it being more durable, and thus perpetuating the fame or disgrace of a good or bad taste in a greater degree. The public expected much from one whose official situation rendered him a sort of leader in art; who, as the successor of Wren and Wyatt, should have elevated architectural taste; for if the fountain-head be pure so will be the streams which flow from it. The beauty of the Parthenon and the Poikile, of the temple of Theseus and the Erectheum, gave birth to the unequalled sculptures of the one and

the pictures of the other, in the same style of high art, producing fruit after their kind; for the pure, the divine taste of the architect and his patron refined that of the painter and of the sculptor. Can we expect such fruit from the style which is now unhappily reviving? "An Ionic," said a defender of this modern antique, "is an Ionic, and a Doric a Doric, whether from the Parthenon or the Temple of Concord." Be it so: but those who can see no difference between the one and the other are unfit to be directors of public taste.

Chambers, and Wren, and Perrault, and Palladio, it has been said, all used, beautified, and simplified the Roman style. Granted:—but they had neither seen nor known the Grecian. They selected the most beautiful of the known specimens; they divested them of the extraneous ornaments of the Colosseum, of the Theatre of Marcellus, and of the Temple of Concord; and made them approach the simplicity though they missed the genuine character of the Greeks. Few things, alike in nature, can differ more than do the Greek and Roman creeds of the orders:—beautiful spirals; lovely contours composed from ellipses, parabolas, hyperbolas, and other conic sections, selected from the higher mathematics by

the greatest mathematicians, compose all the profiles of the one: clumsy quarter-rounds, circular and bolstered *cima rectas* and *reversas*, struck by a pair of carpenter's compasses, are characteristic of the other. The geometry of Euclid was not less likely to be improved by any of his successors than the architecture of the days of Pericles by the practicers of the time of Marcellus, of Constantine, or of Dioclesian. Yet the style of these latter periods is reviving in the nineteenth century, and in the metropolis which boasts the possession of the Elgin Marbles.

What matter is here for reflection? It was bad enough to be thus misled in taste in the days of Jones and Wren. Had the highly-gifted Wren visited and studied the Parthenon, with Phidias for his guide, with Stone the master-mason of St. Pauls for his builder, and Gibbons for his carver, of what might not our metropolis have boasted now? What would not St. Paul's, with all its present excellencies of design and execution, have been, had he acquired the severe yet enchanting purity of Athenian taste? I feel no hesitation in saying that Sir Christopher Wren would have become, in that case, one of the greatest architects whom the world ever knew:—but what may

be excused in him, and in his day, cannot be excused at the era of 1821. The eye of refinement should not now rest satisfied with the clumsy ponderosities of the Roman school, or even with the better taste of Chambers, who may be called the *Palladio riformato* of his time; nor should designs which would scarcely admit their author as a probationer, much less as a student, in our ill-constructed and worse-governed Royal Academy, be found issuing from the office, and backed with the authority of the Surveyor-General of George the Fourth.

Now I am upon the subject of the Royal Academy, miscalled of Architecture, I will take the liberty of saying a few words upon a matter connected therewith. It is my firm conviction, in which I am joined by some of the ablest professors of this day, that the want of a proper establishment for the instruction of architectural students is one great cause of the retrograding of art in this country. I mean such an institution as would have an influence on the public in the direction of its taste; an institution to which those who have patronage to bestow would be glad to recur for the choice of an architect, instead of applying to the paper-hanger and upholsterer, the brick-

layer or the carpenter. To call the Royal Academy an academy of Architecture is so absurd that I am convinced the academicians themselves, particularly those few who are architects, could not hear of such an epithet without a smile. Four out of the forty academicians are architects; a short period must, I fear, reduce even that number; and the policy of the Academy appears to be against increasing its strength from architecture.

What does this academy for the architectural student? Common students are admitted when they can copy plaster-casts indifferently well; whilst the young architect not only is required to *copy* and to *draw* well, but he must present two designs of his own invention; one on being admitted a probationer and one when admitted a student. All this is well enough, if, when he was so admitted, he was not degraded, at the public distribution of their medals, beneath the plaster-drawing boys and the dirty modellers. Next, he has the privilege of attending *six* lectures on his art in the course of twelve months. Let us draw a little comparison between these advantages and those afforded in the capital of our ancient rival—France. There the youth has the power of

attending lectures *twice a week*. The English student can visit a library twice a week during a short period of the year, and such a library of architectural works is it, that some of its own students possess a better. In Paris two excellent libraries are *constantly* open to him. At our Royal Academy there are neither models of ancient buildings, nor their details, nor of curious pieces of construction or machinery.—In the French metropolis he has all these. The Royal Academy sends a student to Italy, alternately from the classes of painting, sculpture, and architecture, once in three years; and I believe maintain him, on a small allowance, during two or at most three years. The French government send a student in each class to Rome every year, and maintain him there in their own academy, under able instructors, for five years.

I am at a loss to conceive why these things should be so; or why the most useful of the three arts should have the fewest representatives, if I may thus term them, in an academy supported by the public. I would gladly learn why models are not provided for the use of the architectural students, and lectures of such a nature as may be of solid utility to them. I should be most blame-worthy and

ungrateful did I not acknowledge, as a student of the Academy, the obligations we have all been under to the present able professor of architecture. His liberality is too well known in all matters of art to need my eulogium. But six lectures on such an art as architecture, in the course of a year, do little more than whet the appetite—not satisfy it. I will lastly venture to ask, on public grounds, whether the funds of the Academy, on the distribution of which the public have some right to be informed, are not sufficient to support as many students as are sent from Paris?

To return.—The Somerset-place of Chambers has many and great beauties; and his work on civil architecture, in spite of his bad taste in reviling as he does the architecture of ancient Greece, which he did not comprehend, abounds with sound remarks, and is such an elementary book as we are still in want of upon the Grecian system. He read his Vitruvius in English, and, I fear, from a bad translation.

The first instance, in the late reign, of a regularly-bred and genuine architect was the classical and scientific Wyatt. The son of an eminent builder, he acquired the soundest elements of his art at home, and, as it

were, from his very infancy. His taste was subsequently refined in a journey to Italy and Greece, from the best sources. On his return, he astonished the connoisseurs and travelled patricians by his Pantheon, which has been unfortunately destroyed by fire; by various designs; and by general knowledge of his art, presenting qualifications till then unknown since the days of Jones and Wren: owing to which, Italian architects had been usually employed when any affair of consequence was required. Possessed of genuine taste and feeling, Wyatt introduced into this country a style approaching more nearly to the standard of excellence than any which had preceded it.

The ancient architecture of England—the venerable, the ill-used, the spoiled, the pampered Gothic, came also under his observation; and, in the majestic Castle of Windsor, the Abbey at Fonthill, and the fine Cathedral of Salisbury, he designed and restored, with a refinement and skill equal to the several originals. His houses, villas and mansions, are among the most convenient, splendid, and tasteful in the country, and bear upon their faces proof that the builders were not their own architects.

In a similar school, and with like advantages, did Milne, at scarcely the age of manhood, carry away the first prize in the first class of architecture at Rome; and had the honour of being the first Briton who obtained a premium for art in that city. Before he had completed his studies, he sent over in competition, and conquered all his opponents, his design for Blackfriars bridge, a work of skill and of originality. Milne's style was too decidedly Roman for his day; but to his honour be it spoken, and to which I bear most willing testimony, his love was such for our great metropolitan structure St. Paul's, at which he long held the place of superintending surveyor of the works, that he never would see it defaced, or altered, or spoiled in any way; and scarcely a week passed of his protracted life without his giving it a personal survey.

The encouragement bestowed in those days upon architecture, and upon regular architects, by the Sovereign and nobility of the country; the establishment of the Royal Academy; the titles conferred on Sir Wm. Chambers, and on Sir Robert Taylor one of the architects of the Bank of England, whose beautiful little Tuscan villa at Richmond is not only his masterpiece, but one of the most original composi-

tions in modern architecture; and the biennial premiums for architecture; founded a school from which emanated many able and tasteful men. Holland; Dance, whose simple and effective elevation of St. Luke's Hospital for lunatics shows what genius can do even with what is called the poorest of material, brick; Soane; Harrison, of Chester; Wilkins; Smirke; and other eminent living architects, are among the scions of this school, and their works bear testimony to their talents.

The front of Carlton-House, by Holland, and many of the apartments in that palace, by the same architect, have a harmony of proportion and greatness of style which, considering the difficulty of patching up an old house, are quite admirable.

The new part of the Bank of England, by Mr. Soane, possesses many noble and tasteful halls. Its exterior is massive and in good style; its construction of genuine stone, brick, and iron, by which the opulent and munificent directors of that great establishment have proved themselves to be the most economical as well as the best builders. When London is fallen,

“And such as Memphis is shall London be!”

Old Play.

this building, with those of Wren, and the bridges, will be almost the only ruins left to indicate its present greatness, unless more of a similar description shall be permitted to be built, and an edict issued against the *Mary-le-bone* and *St. George's Fields* school of temple-builders.

“A little stronger than strong enough is the best maxim in building,” said the anonymous author of ΟΙΚΙΑΙΑ* and should be written over the desk of every architect's office; but this is flat heresy in the new school. *Strong enough to last till it be sold* is all that is now required, and great ingenuity is certainly called forth in its professors to accomplish it, and to avoid all needless extravagance.

The new Custom-House of London is a very useful strong building, not remarkable for its taste nor for much propriety of adaptation in its ornamental detail. Furnival's Inn is contemptible as a work of art, possessing no one fine quality; and the excellency of its workmanship renders it more grievous that it should be designed with so little taste.

The new street now in formation from Pall-

* The late James Peacock, Esq. one of the architects to the city of London.

Mall to Portland-Place is a great and useful undertaking; possessing, as a whole, a grand and commanding character, with more architectural features and variety than any large work that we have seen since the rebuilding of London after the great fire. Yet it has many blemishes; some of the architectural specimens being in a taste absolutely barbarous, and mixed with others equally pure and refined. Its masses, great parts, and divisions, are grand and effective; and its breaks and general outline productive of an agreeable variety of light and shade, while at the same time it is free from that dull monotony of elevation which is so wearisome in many of our new streets. It is also the finest work now in process, and has given an architectural feature to the metropolis, much wanted as a relief from the eternal *two windows, iron railing, and a door—two windows, iron railing, and a door,—*of the new squares and streets of St. Mary-le-bone.

Until this undertaking, our architecture seemed selfish and internal. Windows undecorated externally, and made solely to give light and air to the interior; and doors placed in square brick holes, whose only service seemed to be to exclude strangers, were the prevalent features of modern English domes-

tic buildings: whereas architecture, on the contrary, should exhibit the taste and wealth of the master of the mansion, by its exterior, to the observing stranger, as well as contribute to the internal comfort and splendour of the family and its immediate friends.

Other works which add to the architectural beauty and service of the metropolis are the bridges recently thrown over the Thames. The best are Waterloo,* Westminster, and Blackfriars, which are all built of stone, and with architectural elevations. The Southwark, or Trafalgar, as it is named, and that at Vauxhall, are of iron on stone piers. Westminster bridge is a fine, handsome, and unpretending structure, built by a Swiss architect of the

* Waterloo bridge is 1250 feet long, Westminster 1220 feet, and Blackfriars 995 feet. Waterloo bridge has nine elliptical arches of 120 feet span over the river, with piers of 20 feet thick, built entirely of granite, and 40 brick arches for a causeway on the Surrey side, and the entire length of its land and water arches is 2890 feet. Westminster has thirteen large and two small semicircular arches, with fourteen intermediate piers. The arches of this bridge all spring about two feet below low water; it was commenced in 1738, and opened to the public in 1750. Blackfriars bridge has nine large elliptical arches, was begun in 1760, by Mr. Milne, and finished in ten years and three quarters.

name of Labelie. Blackfriars bridge is novel and handsome in design, its elliptical arches well suited to its situation; but its material is bad and perishing, and the curved line of its surface ill agrees with its architectural decoration. London bridge is an ugly ruin, and I hope will soon be removed. On the subject of that called Waterloo, the latest and the grandest of the stone bridges, I must detain you a little. Waterloo bridge is one of the most stupendous architectural monuments of late years, and one which might have conferred lasting honour on this country, had it been designed by an architect. But, with its pseudo-architectural decorations, it is now a fabric in which several acknowledged principles of good taste are utterly violated. Its mathematical principles being copied from the *Pont de Neuilly*, it has given opportunity to the French to revile us for want of originality in our architects; and its clumsy columns and inelegant and unnecessary balustrade, instead of a simple parapet, have nearly spoiled what otherwise would have been a magnificent although not original design. Canova has denied, to a gentleman of my acquaintance who asked him the question at Rome, that he pronounced the eulogium upon this bridge

which has been attributed to him; indeed, I should have wondered much had not that illustrious sculptor been anxious to excuse himself from such unqualified praise as has been put into his mouth concerning it.

To enter a little further into this subject; I confidently ask, without intending the least offence to the very ingenious contriver of the work in question, whether the habits and education of a mechanic are likely to qualify a person for *designing* a bridge? I am willing to admit, that extensive practice in the construction of harbours, and in the cutting of canals, may give a man greater facility in executing works under water; but, unfortunately, these are the parts by which the eye of taste cannot be annoyed; and even this branch of architecture, by the way, was by the Italians always confided to their architects and painters, the custom of those days being to qualify students alike for either profession or both. Leonardo da Vinci, under the orders of Ludovico Sforza, conveyed the waters of the Adda to Milan. The same artist made the canal of Mortesana navigable as far as the valleys of Chiavenna and Valtellina, a distance of two hundred miles.

It is to be hoped, if another occasion of this

nature should offer, that an architect or architects may be at least *consulted* on any design proposed. If it be considered advisable for the public to employ an engineer, his assistance might surely be restricted to matters within the reach of his information;—namely, the founding of the piers and the abutments, though I confess that I myself should feel no misgiving should I see such a work confided altogether to an experienced architect. It was not by the employment of milwrights that Florence became possessed of its beautiful bridge of the Holy Trinity, nor did Napoleon omit to employ those who understood the arts of design when he projected that of Jena. Neither was Perronet, the architect of the *Pont de Neuilly*, of which Waterloo bridge is a bad copy, a steam-engine maker. Moreover, when it is considered that a truly elegant structure of this kind would occasion no additional expense above one less tasteful, it is to be hoped that, in any future specimen, the hand of genuine taste and of real architectural skill may be discernible in its *ensemble* and details.

Among the most ancient bridges in England, and indeed by some esteemed altogether the oldest, is the Gothic triangular bridge at Crowland, in Lincolnshire, which was erected in

860. London bridge is an old Gothic structure, originally built with twenty small arches of twenty feet wide each; but it has undergone various successive alterations till it arrived at its present state of consummate ugliness, and perfection of all that is improper in a work of the kind. The longest bridge in this country is that over the Trent, at Burton, built in the twelfth century, of squared freestone. It consists of thirty-four arches, and is one thousand five hundred and forty-five feet in length. Another curious specimen is the bridge built over the Taaf, in Glamorganshire, by William Edwards, a country mason, in the year 1756. This remarkable structure consists of one stupendous arch, which, though only eight feet broad and thirty-five high, is no less than one hundred and forty feet span, being a segment of a circle of one hundred and seventy-five feet in diameter.

In France the construction of roads and bridges has been committed for a length of time to a corps of architectural engineers, for whose instruction an academy has long been instituted, which has acquired great and deserved celebrity, particularly since it was under the direction of Perronet and De Chezi who may be considered in some measure as

its founders. These eminent architects introduced a new system in the mode of constructing bridges, and have left many fine examples in the bridges of Mantes, Melun, St. Mayence, Neuilly, and the *Pont de la Concord*, at Paris, which unites the *Champs Elysées* to the Palace of the Legislature. One leading principle of these architects was to render the piers as light, and the arches as extended and lofty as possible.

Among other bridges worthy of mention is that at Rimini ; of which Temanza, a Venetian architect, who published an account of it, says, that the voussoirs and other stones have their joints so exactly filled that a hair could scarcely enter between them. This fine jointing is an excellence in construction to which the moderns pay too little attention. The same author also believes that there were particular artificers among the ancients whose business it was to smooth the joints of the stones, and quotes an ancient writer as mentioning this by the title of *Quadratorii*. The *Ponte St. Angiolo*, at Rome, and the *Ponte Rialto*, at Venice, are also deserving of notice ; the latter consists of one very flat and bold arch, nearly a hundred feet span, and only twenty-three feet high above the water.

There is, however, a bridge in the city of Munster, in Bothnia, in a yet bolder style than the Rialto. Kircher mentions a bridge in China three hundred and sixty perches long, without any arch, but supported by three hundred pillars and beams. In the Philosophical Transactions is a representation of a bridge in the same country, built from one mountain to another, consisting of a single arch four hundred cubits long and five hundred cubits high, from which circumstance it is called the *flying bridge*.

I should merit censure did I omit the introduction of iron bridges, which are the exclusive invention of British artists. The first erected was that over the Severn, at Colebrook-Dale, in Shropshire, constructed by Mr. Abraham Daly, iron-master, of that place; and is composed of five ribs, each of which has three concentric arcs connected by radiating pieces. The interior arc forms a semicircle, but the others extend only to the sills under the roadway. Upon the tops of the ribs are laid cast-iron plates, which support the roadway. The arch of this bridge is one hundred feet in span. The second bridge of this material was designed by Thomas Paine, the celebrated political writer, and was construct-

ed, after his directions, by Messrs. Walker, at Rotherham, in Yorkshire, and brought to London, where it was erected and exhibited for some time in a bowling-green, in the New Road. It was originally intended for America; but the materials were afterwards used in constructing the bridge over the river Wear, at Bishop's Wearmouth, Sunderland. It consists of one arch of two hundred and thirty-six feet span, being a segment of a circle of four hundred and forty-four feet diameter; and the whole height from low water is about one hundred feet, admitting vessels of from two to three hundred tons burden to pass under without striking their masts. A series of one hundred and five blocks form a rib, and six of these ribs form the width of the bridge, which is thirty-two feet. The spandrils are filled by cast-iron circles, which touch the outer extremity of the arch, and support the road-way; which is formed by a strong frame of timber, planked over and covered with a cement of tar, chalk, then layers of marl, lime-stone, and gravel. The abutments are masses of solid masonry, twenty-four feet in thickness, forty-two feet in breadth at bottom, and thirty-seven at top. There is a beautiful model of this bridge in the ante-room of the

great room of the Society of Arts, &c. at the Adelphi, to which I take leave to refer the inquirer after this novel species of pontine architecture.

Among recent English works, the portico of Covent-Garden Theatre, imitated in form from the Tetrastyle portico of the Agora, at Athens, but copied in detail from the Temple of Minerva Parthenon, is, perhaps, the most chaste in style, although its application would more become a town-hall than a dramatic theatre. The exterior of Drury-Lane Theatre appears to me more characteristic in its application; and we should not forget, in examining this edifice, that an Ionic portico, the antæ of which are only executed, originally completed the design. Of its new porch, though I am told that it was approved by the Professor of Architecture to the Royal Academy, I am really ashamed to speak, so disgraceful does it appear to all concerned.

The columns of the portico of the College of Surgeons, in Lincoln's Inn Fields, from the Ionic of the Ilyssus, are, in themselves, fine and well executed, but belong no more to the front to which they are attached than a hussar's cap does to a bishop in his pulpit. The beautiful Ionic portico to the house of the Board of

Control, Cannon-Row, Westminster, one of the purest, finest, and best applied in London, also taken from the same exquisite original, is worthy of examination; and would afford a far better example for a prize-subject for the junior students of the Royal Academy, than Greenwich church, Shoreditch, or St. John's, Westminster, all of which have unaccountably been given by that learned body; as if they meant to undo in the council-room the dictates of their masters in their offices.

Another very beautiful example of this order is in a chapel, near Grosvenor-Place, by Hyde-Park-Corner, designed, I believe, by Mr. Smirke; wherein the portico, according to the best examples of the Greeks, and to the natural fitness of the thing, is not a mere *appliqué* stuck on as an after-thought, but a natural continuation of the roof supported by necessary columns for shelter and for shade.

I have thus touched upon the principal modern buildings that I at present remember; and have endeavoured to speak of them with candour, regardless of any feeling but the character of the country as exemplified in its architecture.

No one can deny that, before either of the decorative arts of painting and sculpture can

flourish generally, architecture must of necessity be understood and cultivated : their well-being depends upon each other, like the voussoirs and keystone of an arch, and they must stand or fall together.

There is, however, reason to hope that the state of the fine arts is even now undergoing a great, though silent revolution ; and that the scene of this revolution, I feel proud while I speak it, is England. Canova, a glorious name for Italy in this her period of debasement, acknowledged that England would be worth visiting were it for the sake of the Elgin marbles alone. These, the immortal cartoons, and the works of the restorers of Grecian beauty, render London now a complete school of art for either painting, sculpture, or architecture. The revolution I allude to may be said to have commenced with the introduction of the works of Phidias from the Parthenon ; and we must not neglect to observe that it has received high encouragement from the determination of our present most gracious Sovereign to patronize and advance the arts ; a determination made known to the public by the most active minister of the crown in his place in the House of Commons. Pupils from Canova, and other

eminent Italian artists, as well as from Paris, Madrid, and America, now visit London in order to complete their studies. Casts from our works of art are sent to various parts of the continent; and our examples and our studies are actually purifying the continental schools from the affectation of French and modern Italian mannerists.

Meanwhile, there is no society in England where architecture is regularly taught, or by which its professors and its practice are fairly patronized. The Dilettanti Society offer some pretension to a patronage of our profession; but their acts have rather tended to the importation of architectural knowledge by missions, than to the cultivation of originality at home; and of the pretensions of the Royal Academy in this department I have already spoken. It is true it bestows honorary medals, pays a Professor of Architecture, and pretends to send students abroad; but, during sixty years of its establishment, it has not given more than some twenty meagre lectures to the students and exhibitors at large, and has sent about a dozen students to Rome. The architectural student is indebted for his education to his private studies; for a mason or a plasterer stands as good a chance as an architect,

at the Academy, for the paltry dole of instruction they offer, or the rewards they bestow. They indeed give the title of R.A. to two or three leading architects, whose names reflect more honour upon the Academy than do these initials upon themselves.

Great Britain possesses at this time many able architects ; but their places, as has been before observed, are permitted by our nobility and opulent commoners to be taken from them ; our public boards, (in many instances,) and our private companies, employing mere executive builders as their architects, whose connection with their work, as well as their ignorance of architecture as a fine art, must ever be a bar to their success.

Our present Professor of Architecture in the Royal Academy, whose zeal in supporting the dignity of the art deserves the highest praise, has said, that “ before the state of architecture can be improved, and the professors excited to that species of emulation which only can render them eminent, *strong and marked distinction must take place; those who have patronage must consider it as a sacred trust and deposit, the meed only of science and genius.* The claims of the untaught, ignorant, and presumptuous, must not only be disallowed, but repelled with

indignation and contempt, till at length they are consigned to that obscurity whence they ought never to have been suffered to emerge."

I will now call the attention of my readers to a few brief observations on domestic architecture, as distinct from those classes which may be denominated monumental or sacred. This generic division of the art could make but little progress till the discovery of certain other arts necessary for its perfection; such as making machines for raising and transporting heavy bodies; the taming of animals and training them for carrying materials; and, last of all, the art of working metals, particularly iron.

The study of domestic architecture, properly so called, that is the art of *house-building*, is the most useful and not the least difficult part of an architect's education; and here we will take occasion, though perhaps not quite german to the subject, to introduce a favourite passage from Sir Henry Wootton, who says: "Every man's proper mansion-house and home, being the theatre of his hospitality, the seat of self-fruition, the comfortable part of his own life, the noblest of his son's inheritance, a kind of private principedom; nay, to the possessors thereof, an epitome of the whole world

may well deserve, by these attributes, according to the degree of the masters, to be decently and delightfully adorned. For which end there are two arts attending on architecture, like two of her principal gentlewomen, to dress and trim their mistress—picture and sculpture; between whom, before I proceed any farther, I will venture to determine an ancient quarrel about their precedency, with this distinction; that, in the garnishing of fabrics, sculpture no doubt must have the pre-eminence, as being indeed of nearer affinity to architecture itself, and consequently the more natural and more suitable ornament. But, on the other side, (to consider these two arts, as I shall do, philosophically and not mechanically,) an excellent piece of painting is to my judgement the more admirable object, because it comes near an artificial miracle to make divers distinct eminences appear upon a flat by force of shadows, and yet the shadows themselves not to appear, which I conceive to be the uttermost value and virtue of a painter, and to which very few have arrived in all ages." What our painters and sculptors may say to this employment of their arts as dressing-maids to architecture is not for me to determine.

Cities in ancient times were mostly walled ;

and the inhabitants being principally shepherds or husbandmen, were obliged to go out at the gates every morning, not returning from their occupations till the evening. The gate of the city, therefore, was the place of the most public concourse and resort. The Greeks and Romans assembled in their market-places or squares for the purposes of commercial intercourse or for pleading. Our ancestors assembled in the courts of their several baronial castles, whence arose the *courts* of sovereign princes. In eastern countries, where the monarchs are generally secluded in their palaces from public gaze, the populace assembled at the gates of the seraglio. This custom of attending at the gates of the palace is as old as the times of the first kings of Persia, as we read in the book of Esther.

I WILL now proceed to a brief summary of this course of lectures, in which I have endeavoured to show a connecting link, or derivative tie between the several countries which have given a name to architecture, not unlike the philological connexion of languages with their roots and parent stock.

Among the earliest examples of a style to

which I called the attention of the reader was the Egyptian, which is generally characterized by a remarkable solidity of construction, boldness of form, and colossal size.—Its elements are the pyramid, the obelisk, and the multi-formed column. Its ornaments, sculpture in mere outline, or only the shadow of relief; and hieroglyphics of men, women, birds, with sphinxes and other fabulous animals. Its materials, granite, porphyry, and other hard and durable substances. Its grandest relics are the pyramids, the obelisk removed from Egypt to Rome, the Temple of Tentyra, and the ruins of Memphis. Fragments of its architecture most useful to the student are to be found in the Egyptian room at the British Museum; these, aided by the magnificent works of Denon—the French *savant* who accompanied Buonaparte to Egypt, Mr. Hamilton's *Egyptiaca*, and Belzoni's travels, may be said to form a complete school of Egyptian architecture.

The style which prevailed among the ancient Hindus appears to be derived from the same original ideas with the Egyptian: and their excavated temples bear witness to their indefatigable labour, skill, and industry. The Hindu style is generally dark, heavy, and monotonous; its type is the cave; and its ma-

terial a coarse and consequently friable stone. Yet it sometimes approached the beauty of Grecian architecture, after the invasion of their country by the Greeks under Alexander, as the singular and beautiful column of which I spoke in my second Lecture proves. Hodges and other Indian travellers, but more especially Thomas Daniells, and Sir Charles Doyley in his *Antiquities of Dacca*, have thrown all the light that can possibly be required by the student on this very remote style of the art.

Architecture then proceeded to a state of grandeur among the Assyrians. The finest works of this epoch were in Mesopotamia, Carthage, Tyre, Babylon, Persia, and China. The style of this latter people I have presumed to be derived from the tent, and as much as is requisite may be learned respecting it in Chambers's works, at Kew, and in other recent constructions. I have described some of its best and most substantial buildings, which have been unaccountably neglected for its bamboo work, its fosses, and fragile pagodas.

I next called your attention to the glorious period of Grecian elegance, refinement, and grandeur. The first material of this people was timber, and its construction gave rise to the Doric order. Its next, its last and best,

was marble. The earlier examples are shown in the various Dorics of Pæstum, of Corinth, and of Athens; at which latter place, indeed, the most beautiful of the Grecian specimens were to be found. Their orders—the Doric, the Ionic, and the Corinthian are the elements of this style; and will recal by association the subjects of the preceding Lectures on the architecture of the Greeks. Its epochs were the emigration from Egypt, the founding of Athens, Thebes, and other ancient cities, to the time of the enlightened and tasteful Pericles, who formed an epoch not only in the history of Greece, but in that of the world. The next was from his time to that of the colonies, and its decline and ruin took place in the middle ages.*

The portico of Covent-Garden Theatre for its columns, and the capitals from Athens in the court-yard of the British Museum; the excellent work on the Doric order by my late friend and able coadjutor Mr. Edmund Aikin, who has recently departed from us in the commencement of a brilliant career; with the works of Stuart, Revett, and Wilkins, are

* Be it remembered, however, that the Greeks never, like the Romans, contributed to the spoliation of their own architectural beauties.

ample schools for this order, which Aikin properly named the *Grecian order par excellence*.

Of the Ionic, the columns at the College of Surgeons; the porticoes of the Board of Control; the chapel in Grosvenor-Place, before mentioned at the commencement of this Lecture, as an imitation of the simple and grand Ilyssus; the capitals and portions of the shafts from the Erectheum and Temple of Minerva Polias, with their beautiful fragments of frieze and cornice, in the Elgin room at the British Museum; together with the before-mentioned works of Stuart and Revett, and the Ionian antiquities published by the Dilettanti Society, are the best existing schools for the amateur or student.

For the Corinthian, I would refer to the portico of Carlton-House; the lower range of St. Paul's Cathedral; the portico of St. Martin's-in-the-fields; the round end of the Bank; and the columns lately removed from the Proscenium of Drury-Lane Theatre; with reference to casts lately arrived in this country from the columns of the Campo Vaccino and the temple of Tivoli, belonging to Mr. Joseph Gwilt, who may some day, I hope, be induced to permit their general inspection. They are next in value to the *originals*, having been

moulded upon them; and exhibit, in comparison with the imitation of the latter at the Bank, a highly original character and taste. Stuart and Revett again, with a little of Palladio, and reference to fine casts, or the originals, must be attended to for the Corinthian. Of this order, and of this alone, has Rome any really fine examples.

From Greece I traced the art into Etruria, where the Doric was used, and whence the Tuscan is said to have arisen. The Tuscan, as seen in Roman buildings, as used by the restorers of the art, Palladio, Scamozzi, Wren, Chambers, and Wyatt, does not differ enough from the Doric to be denominated a new order; but, as described by Vitruvius and as used by Jones in the portico of St. Paul's, Covent-Garden, is really a characteristic and beautiful innovation.

The orders of architecture according to the Grecian system are, as I then proceeded to observe, three: the *Doric*; the *Ionic*; and the *Corinthian*. In the Roman and modern Italian system they are five: the *Tuscan*; a non-descript called the *Doric*; another but little better, or more like the original, called the *Ionic*; the *Corinthian*; and the *Composite*.

The Grecian orders of sacred buildings or

temples were seven; and their modes of intercolumniation regulated by rule, so as to admit the proper distinction of triglyph and metope in the Doric, and modillions in the Corinthian.

From Etruria the arts, with architecture at their head, found their way into Rome, of which the principal works were derived from the Greco-Italian school of Etruria. Among the earliest was the *Cloaca Maxima*, or great sewer of Rome, a work grand, imposing, and eminently useful. Temples almost innumerable followed, theatres, and amphitheatres.

The elements of the Roman style are borrowed and varied freely from those of the Greeks, and consist of their five orders—the Tuscan, the Doric, the Ionic, the Corinthian, and the Composite. Of the Tuscan there are no remains. Of the Doric their best examples are in the Theatre of Marcellus at Rome, and that at Vicenza; the Colosseum; the baths of Dioclesian, at Rome; and the triumphal arch at Verona. Their finest Ionics are those at the temple of Fortuna Virilis, at Rome; the theatre of Marcellus; and the baths of Dioclesian. Of the Corinthian, which they have best used, we may particularize, among many others, the portico of Agrippa at the Pantheon; the frontispiece of Nero; the baths

of Dioclesian; the temples of Jupiter, of Mars, of Vesta, at Rome; and of the Sybil, at Tivoli. Of their Composite, the Arco da Leoni, at Verona, which by the way has a Corinthian entablature and an Ionic base, with a Composite capital; the arch of Titus, at Rome, displaying nearly the same incongruities, and many more recent works.

The scholar is recommended to the various books on Roman antiquities; as Vasi, Desgodetz, Palladio, Piranesi, &c.; and to the amateur, who wishes to see examples in London, we beg to point out as the best Tuscan, St. Paul's, Covent-garden; and the best Roman Doric portico, that of Shoreditch church. Of Ionics we have nothing better than Jones's Shaftsbury-house, Aldersgate-street; his Whitehall, and part of Lincoln's Inn Fields. For the Corinthian we refer him to St. Martin's-in-the-Fields, and St. Paul's Cathedral; and for the Composite, to Jones's upper order at Whitehall, and Wren's at St. Paul's.

These observations will, I trust, recall and fix the substance of the preceding Lectures, and render them clear and connected.

I next adverted to the second epoch of Roman architecture, from the time of the conquest of Greece by the Romans to that of

Julius Cæsar, during whose sway the art did not reach that splendour which it attained under the succeeding emperors.

In the Lecture upon this period of Roman art, I called your attention to *stereotomy*, or *construction*, which was a part of the profession in which the Romans eminently excelled, and described the fatal consequences of a want of its knowledge, pointing out many errors in modern construction, and endeavouring to offer remedies.

This led on to the next epoch, which commenced in the reign of Hadrian, when I described the prevailing character of Roman architecture as differing from that of the Greeks in the greater variety and number of their public edifices. I also noticed the invention of amphitheatres and other structures exclusively Roman, as aqueducts, bridges, baths, triumphal columns and arches, forums, basilicas, &c. all astonishing from their colossal grandeur. The principal amphitheatre of Rome was that whose ruins stand as a mighty rock confounding the calculations and the powers of modern days, now known by its appropriate name the *Colosseum*.

The villa of Hadrian, at Tivoli, next came under consideration ; that immense and com-

plete royal edifice which embraced an entire city in its circuit, with temples, theatres, courses, baths, and other Roman luxuries.

From this period the art gradually declined; Rome was dilapidated as much by its own emperors as by its enemies. Constantine, for instance, and his successors of the Greek families, successively plundered it to enrich Constantinople; and the Goths and Vandals completed this triumph over the fallen greatness of ancient Rome: the arts then sank for centuries, and rose not till the revival of literature, when the architecture of the times sprang up in all the varieties of pseudo-Roman, Greco-Gothic, Saracenic, Moorish, and the pointed styles. Borromini and his school plundered the ancients, and bastardized their style: Michelangiolo and Raffaello somewhat improved the taste of the times; but the church of St. Paul, without the walls of Rome, built with the marble columns of the Mausoleum of Hadrian, over which petty arches are turned, cannot but be regarded as a specimen either of very depraved taste, or of a singular want of skill. The church of St. John the lateran, by Borromini, is one of the most curious instances of the blunderings of bad taste now in existence: the niches with

compound and broken pediments, the colossal figures, the wretched imitations of capitals, all proclaim this building to be worthy of its school, and of being held up as an example to be carefully avoided. The errors of this school were described to consist, among other things, in columns broken with rustics, twisted in their shafts, spirally fluted, and otherwise departing from the beauty of their originals; in entablatures without architraves, without friezes, and other important features by turns; tryglyphs without mutules—mutules without tryglyphs or even friezes to protect, as may be seen, I am sorry to say, in many of our newest buildings.

Our next step was to the ancient architecture of England, commencing with a notice of the barrows, round towers, excavations, cromlechs, and similar works, partly no doubt druidical, of the ancient British and Irish. Respecting these stupendous and wonder-exciting monuments of remote time, conjecture can afford no satisfactory hypothesis.

I next adverted to the early settlement of the Romans in England, and adduced proofs sufficient, I hope, to render it evident that the Saxon style was immediately derived from that of those accomplished conquerors: this

led us to the consideration of the style called Gothic, whose essentials were represented to be pyramidal, foliated, and embellished. The arches shoot upwards; the pillars, clustered and banded together, do the same; the pinnacles and turrets rear themselves aloft; all exhibiting their elementary principles as deduced from the groves of our forefathers.

A connexion with the continent, where arts and literature were rising with prodigious rapidity, introduced the Roman style again into England, although a good deal modified by its Italian restorers. The first specimens exhibited a barbarous mixture of Gothic and Italian; in the next place, as if to show the learning of the artists, all the five orders were piled one over the other, as in the building called the Schools, at Oxford, and in the leaning tower of Pisa. Now, however, arrived the day of the highly-gifted Inigo Jones, who introduced a purer style: his Whitehall and other buildings have been alluded to, and his comparative rank endeavoured to be ascertained. Jones was succeeded by Sir Christopher Wren: to whose talents and exertions the fire of London opened a larger field than was ever, perhaps, at the command of any other individual in the art. For want

of regularly-educated architects, Charles II. commissioned Wren, at that period the greatest mathematician and general scholar of his day, to be his architect, and to superintend the repairs of St. Paul's Cathedral. To qualify himself for the task, and to illustrate his Vitruvius by examples, this enlightened and modest scholar proceeded on a tour through France to Rome and Greece. He had reached only France: the fire consumed the English metropolis, and he returned with principles of taste deteriorated, perhaps, rather than improved.

I have thus endeavoured, in a brief way, to recapitulate and to connect the historical system of architecture, which it has been my object to establish in this course of Lectures: and will farther, before I lay down my pen and bid farewell to the reader, sum up what appear to me to be the principal divisions or epochs of the art.

FIRST EPOCH.

From the creation of the world to the flood, a lapse of 1656 years. In this interval we read of Tubal Cain as an artificer in brass and silver, and of the building of the Ark by Noah, &c. &c.

This epoch includes also the period from the erection of the Tower of Babel, by the posterity of Noah after the flood, to the founding of Athens, by Cecrops, A.C. 1556; and to the founding of Troy, by Scamander, about the same date, at which period likewise Moses and Aaron lived, and Cadmus is said to have invented letters.

SECOND EPOCH.

From the founding of Athens by Cecrops to Pericles, about this time (between 400 and 500 years before Christ) lived Phidias and his eminent associates ; in Italy, Coriolanus, Cincinnatus, and Camillus ; among the Jews, Ezra the Scribe ; in Persia, Artaxerxes Longimanus ; in China, Confucius. About this time, also, the architecture of Egypt met with a final blow from the devastations of Cambyses.

THIRD EPOCH.

From Pericles and Phidias to Alexander the Great, Lysippus, Dinocrates, and their contemporaries.

FOURTH EPOCH.

From Alexander the Great, Lysippus, and Dinocrates, to Hadrian and Apollodorus.

FIFTH EPOCH.

From Hadrian to Theodoric, called the Goth.

SIXTH EPOCH.

From Theodoric to the rebuilding of St. Peter's, at Rome, and the period of Leo X.

SEVENTH EPOCH.

From Leo X. to the end of the reign of George II.

EIGHTH OR PRESENT EPOCH.

From the beginning of the reign of George III. under whom the revival of Grecian architecture first took place in any part of the world, to the present day.

THE END.







